

# iPad & iPhone user

**54****GREAT  
FREE  
GAMES**

iPad Pro **VS**  
MacBook Air



**+ PREDICTIONS  
FOR 2016**





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# Welcome...

**W**elcome to the latest issue of *iPad & iPhone User*, the only guide you need to the wonderful world of iOS.

This month we've decided to take things a little easier. After all, Christmas is almost upon us and what better way to while away a few hours than playing a game on an iOS device. We've 54 of the very best free games for your iPad and iPhone.

And if like us you still haven't finished, or even started, your Christmas shopping, we've a few geeky gift ideas in our feature on page 78.

2015 was a busy year for Apple, with the launch of the iPhone 6s and 6s Plus, the Apple Watch and the iPad Pro. So what can we expect over the next 12 months? Turn to page 9 to see our predictions.

We've also an iPad buying guide (page 99), which should prove useful if you are thinking of upgrading soon. Plus, we put both the iPad Pro and MacBook Air through their paces on page 108, and ask whether Apple's king-size tablet can replace a Mac.

We hope you've enjoy the issue. Feel free to send us your feedback via [facebook.com/ipadiphoneuser](https://facebook.com/ipadiphoneuser) or email [rob\\_grant@idg.co.uk](mailto:rob_grant@idg.co.uk).





# Apple won't make iPad/Mac hybrid

Tim Cook rules out converged iPad and Mac

Apple CEO Tim Cook caused a minor kerfuffle recently while promoting the iPad Pro in an interview when he asked, “Why would you buy a PC anymore? No really, why would you buy one?”

The question baffled Mac users, and seemed to suggest that Apple might one day phase out the Mac – or combine it with the iPad to make a hybrid device similar to Microsoft’s new Surface Book. Cook clarified the meaning behind his question in



an interview with the *Irish Independent*, telling the newspaper that Macs and PCs are not the same. Dig on PCs aside, Cook said he understands that some people need desktops and notebooks, while for others, a powerful tablet like the iPad Pro will suffice.

“We feel strongly that customers are not really looking for a converged Mac and iPad,” Cook said. “Because what that would wind up doing, or what we’re worried would happen, is that neither experience would be as good as the customer wants. So we want to make the best tablet in the world and the best Mac in the world. And putting those two together would not achieve either. You’d begin to compromise in different ways.”

The differences between Mac and iPad chips are dwindling, as Apple’s A-series line gets more and more powerful. But that doesn’t mean an iPad will eventually replace a Mac, even if Cook now uses a Pro as his everyday work machine.

“What we’ve tried to do is to recognise that people use both iOS and Mac devices,” Cook told the Independent. “So we’ve taken certain features and made them more seamless across the devices. So with things like Handoff we just made it really simple to work on one of our products and pick it up and work on the next product.”

**Why this matters:** Apple’s core business is hardware, and Macs remain a key piece of this. Mac sales were up 3 percent year-over-year in 2015 as the rest of the PC market continues to decline. While Apple wants to boost iPad sales by launching the Pro as an alternative to smaller notebooks, Cook made it clear the Mac isn’t going anywhere.





## iPad Pro problems

### Apple acknowledges mysterious shutdowns

Some iPad Pro owners have noticed some strange behaviour in their new 12.9in tablets. Normally when you charge a device, unless the battery has completely died, the screen remains responsive. But some iPad Pros are completely freezing, then dying, after a recharge.

Apple knows about the problem, but hasn't said why it's happening. There doesn't seem to be a real fix for it, either – at least not yet. The company published a support document on Thursday advising Pro users to force restart their tablets to bring them back to life, but that's not really a long-term solution, because the issue is ongoing.





## iPhone's 'panic mode'

New mode will let you lock out personal information

If you carry around sensitive information on your iPhone, you could soon have one less reason to panic. Apple has filed a patent to activate 'panic mode' when unlocking your iPhone using a designated finger. Once your iPhone is unlocked using the secret panic mode method, the device would automatically limit access to personal information, reset the device altogether or activate preset actions.

Since Touch ID can register several different fingerprints, the patent suggests that iPhone users could designate a specific fingerprint to unlock the iPhone in 'panic mode'. This would then make your



left thumb your secret ‘panic finger’. According to the patent, using this finger would alert your iPhone you are in distress or in an emergency situation, and your phone would respond accordingly.

Panic mode would give iPhone users a new range of security settings when forced to unlock their devices using Touch ID. For example, an iPhone in panic mode could be set to automatically take photos of the assailant and send them along with your GPS coordinates to the authorities securely over iCloud. Another panic mode scenario could have your iPhone send out distress signals to nearby iPhones. The panic finger could also be used to unlock an iPhone and immediately have it place an emergency call.

**Why this matters:** Apple’s patent filing suggests that panic mode could be a way for users to keep their private information secure in the case that their iPhone is being stolen.

With all the different emergency scenarios presented in the patent, it’s easy to think of other quick actions that can be implemented to improve the safety of iPhone users all over the world. For example, how about activating a panic mode setting to secretly place an emergency call to 911 that instantly provides your name and location without you having to utter a word.

But just because Apple has filed this patent, however, doesn’t mean that this technology will be coming to the iPhone 7. It just means that if another phone-maker implements this technology in the near future, Apple can take them to court and say they thought of it first.





# Apple in 2016

## Predictions for 2016

What we can expect from Apple in the upcoming year

**W**ow. What a year it's been for Apple. The iPad Pro, Apple Pay, Apple Music, Beats 1 and, of course, the Apple Watch, have given us plenty to talk about over the past 12 months – and these releases do more than just hint at what might be coming up in 2016.

### Apple Watch

Apple hasn't exactly bet the farm on its Watch. It was launched with appropriate fanfare, but the company's played it slow and sure since then. In store display areas are discreet, and overshadowed by its longer-established lines. Perhaps it realises that a fair few of us are waiting for the first revision.

Expect that to come in 2016 – around April, when the original model will be 12 months old. If anything



appears between now and then it's likely to be another big-brand collaboration, like the one it rolled out with Hermes back in September. Jumping in bed with a sports brand like Nike – with whom Apple has worked before – would be a logical fit, and give Watch Sport more weight in the fitness arena.

The first revision will almost certainly be an extensive upgrade to bring it in line with its most ambitious competitors, so we're expecting an Apple Watch 2, rather than an iPhone-style 'S' variant. We're also expecting it to be an entirely stand-alone device, along the lines of Samsung's Gear S2, which connects directly to the cellular network, bypassing the Galaxy Phone entirely.

This might seem illogical if you considered the Apple Watch to be a stealth marketing tool





for increased iPhone sales, but it wouldn't be the first time Apple has broken an explicit link between two core products to boost the sales of the newcomer. Think back to its original strategy with the iPod, which was to use it as a Trojan for the Mac (it required a FireWire-enabled computer running iTunes which, at that time, wasn't available on Windows). Only when it produced a PC version did the iPod really fly, and change the company's fortunes forever.

Why do we believe it's going to do that here? Aside from the need to compete with Samsung it's because watchOS 2, which rolled out on 21 September, made it possible for the first time to run third-party applications directly, without using the phone as a data conduit. Building in full-blown phone-free comms is the next logical step.

This will require some additional components – in particular a SIM card and associated circuitry – but advances made in the last 12 months suggest that shouldn't be a problem. The S1 processor in the current Apple Watch is built using the same 28 nanometer process as the chip in the iPhone 5S, which was current while Apple was closing Watch's development cycle. Since then, we've seen both the iPhone 6 and iPhone 6s hit the shelves, and they use a considerably finer process, with their A9 processors built using a 14 nanometer process. Assuming Apple develops a new chip – likely called the S2 – for its second-generation Watch, it's reasonable to assume that it will employ the same 14-nanometer process and, rather than slimming the wearable, use the reclaimed space to bolster its built-in features.



Other notable omissions from Apple Watch that could be addressed in the first revision are native GPS, additional health sensors and a higher capacity battery, not necessarily to deliver a longer work time, but to deal with the additional load of the bolstered range of sensors and comms.

## iPhone 7

We've already had an 'S' model since the last full update, so expect 2016's iPhone 7 to be a more extensive revamp. Pundits are forecasting the death of the home button, which we don't think many would mourn. Adopting soft buttons, as are common on Android devices, makes sense, and it would allow Apple to increase the screen size without bulking up the physical body. Conversely, it may reclaim the lost space to produce a smaller device with the same 16:9 aspect screen as it employed in the iPhone 5, 5s and 5c to tempt an upgrade out of anyone who was put off by the iPhone 6 and 6s's wider, taller bodies.

It would still need to accommodate a fingerprint reader, which is key to Apple Pay, but there's no reason why this couldn't be moved to the side of the case or sited by the earpiece, on the opposite side to the front-mounted camera.

Building the iPhone 7 around an AMOLED screen – as used in the Apple Watch – would make sense on several fronts, as it's less power hungry than the LCD technology Apple currently uses, can display more colours and is more responsive, but it seems unlikely that Apple will roll it into the iPhone any time soon. Analyst Ming-Chi Kuo of KGI Securities, believes the company will persevere with LCD for





Image: Martin Hajek

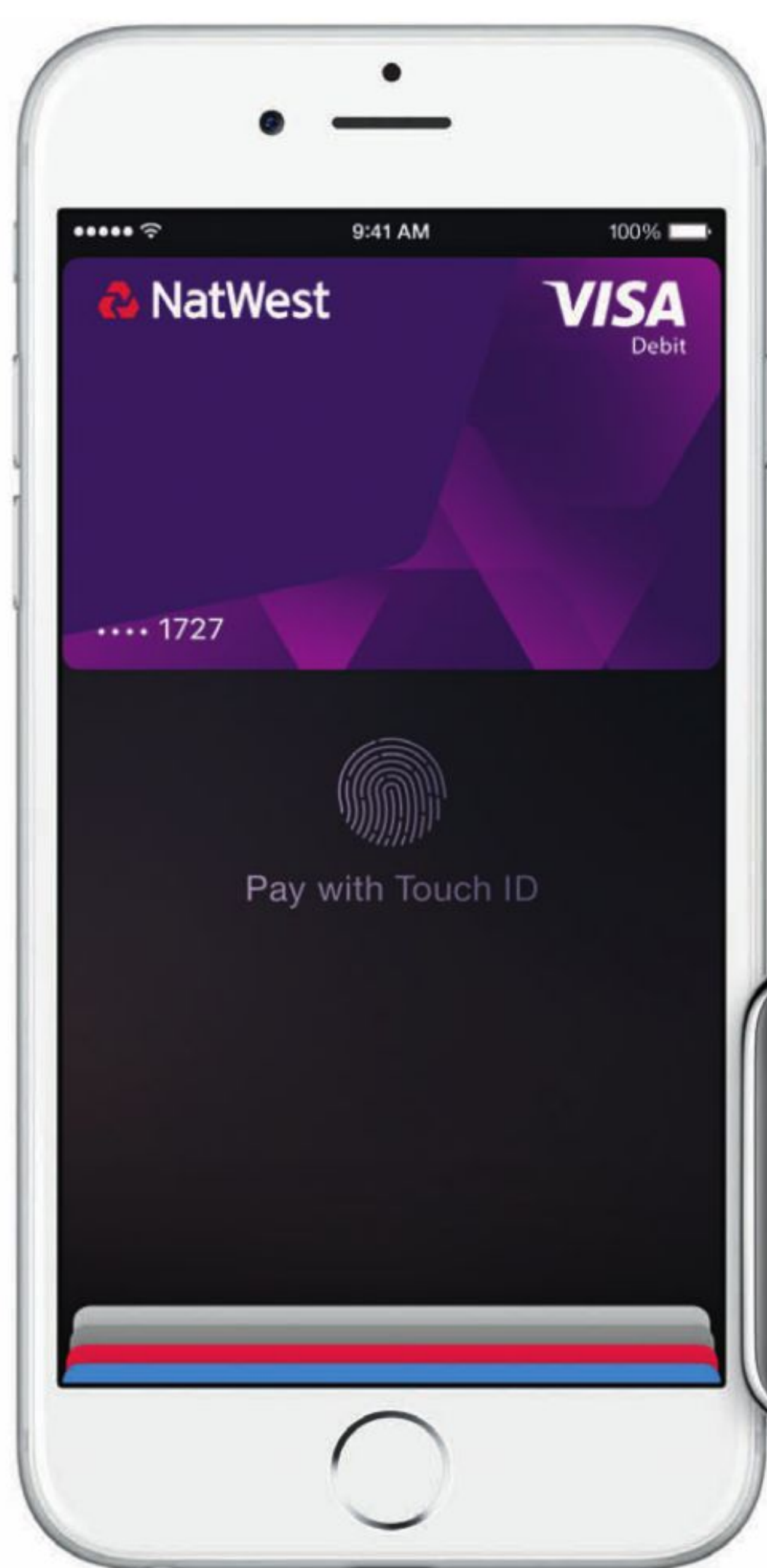
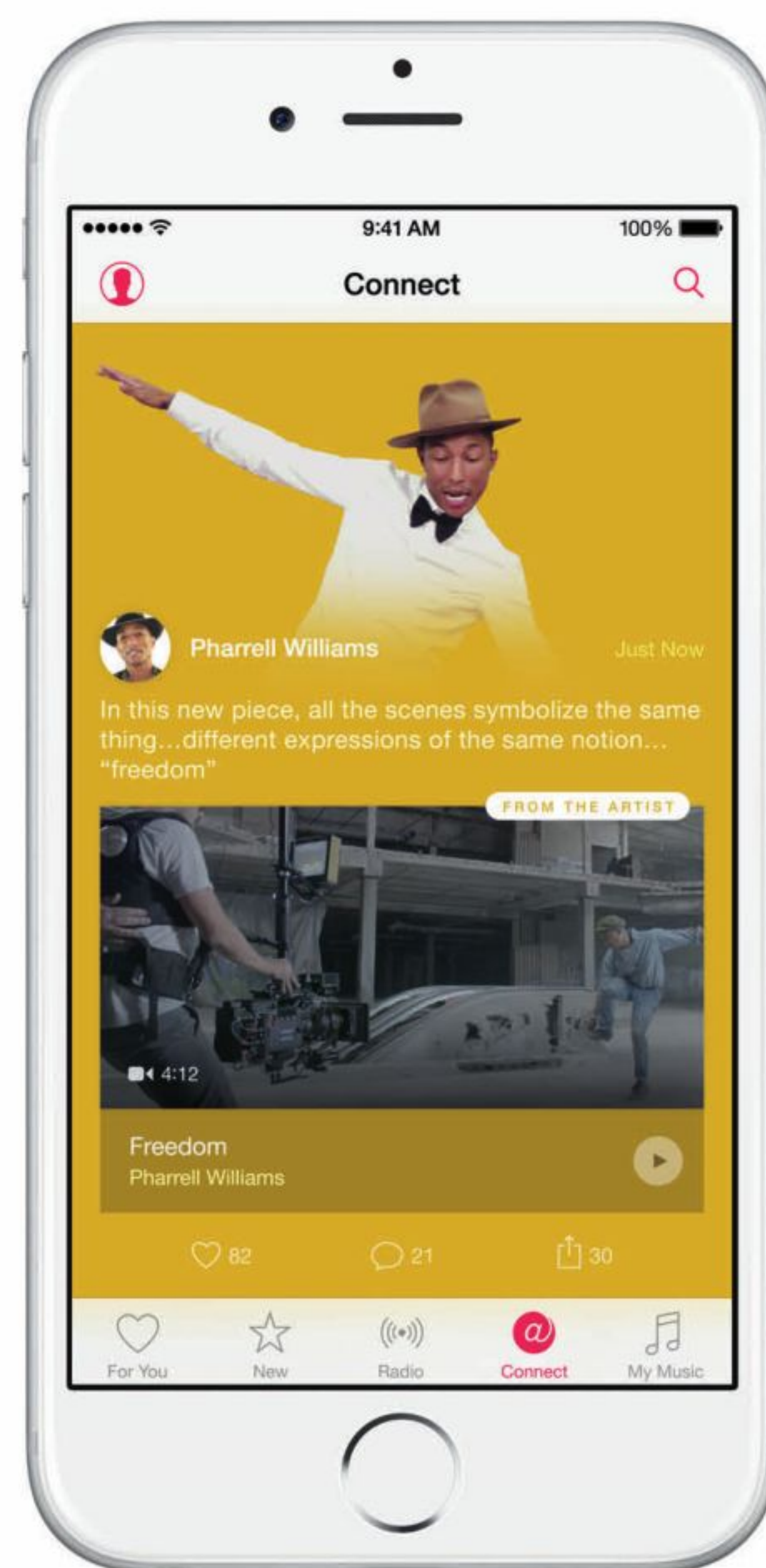
several years, and with Apple suppliers building new LCD factories in China to satisfy future demand, it looks like he could well be right.

### Apple Pay, Apple Music

Alongside these headline developments, there will be a whole series of speed bumps along the way as Apple extends and refines its offering. Apple Pay will be accepted in a wider range of headline stores, and the Apple Music – which is now available on Android – will inevitably expand.

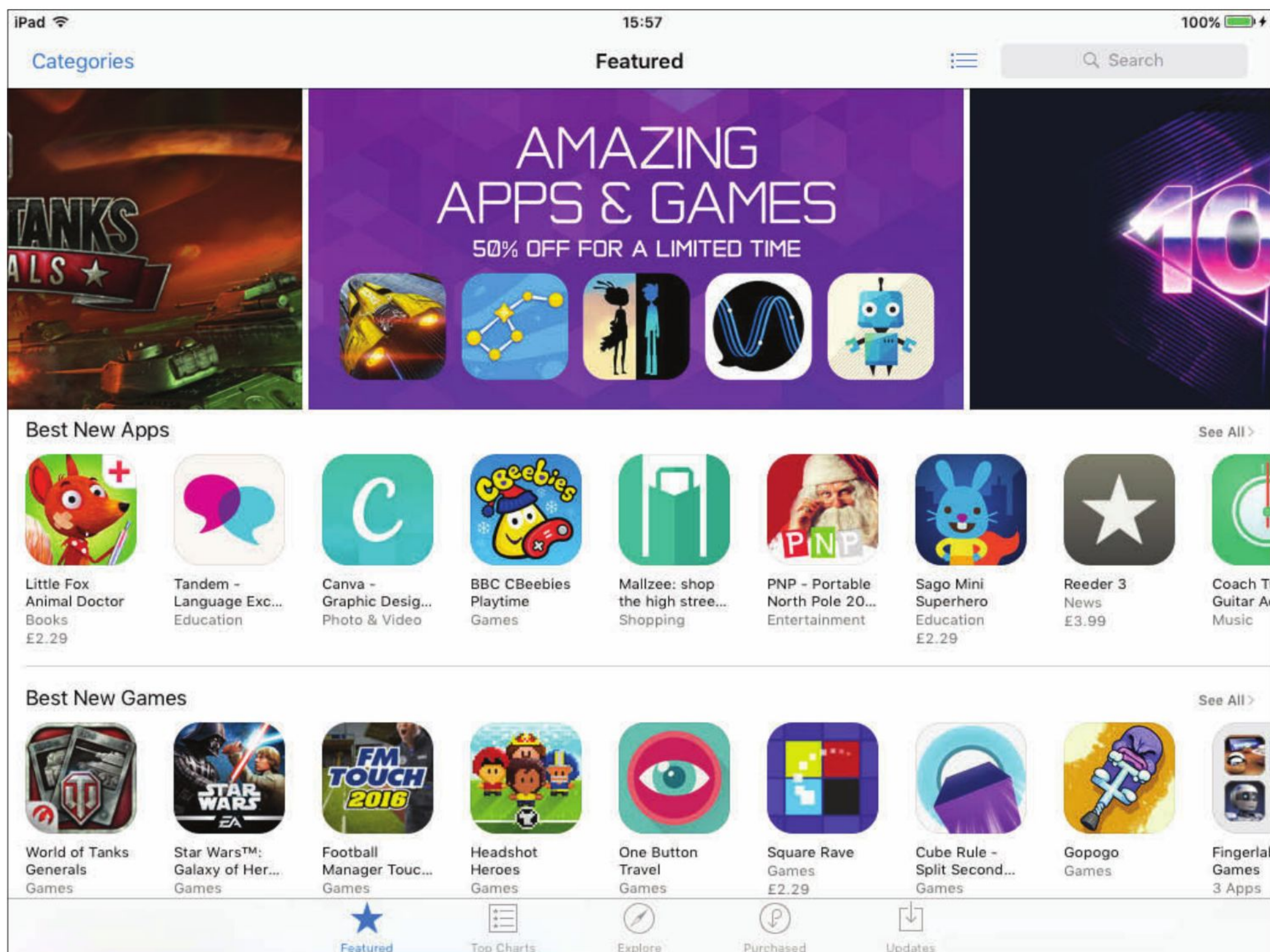
More importantly, Apple Music may prove to be the one thing that keeps the iPod on the shelves





next year. If you'd asked us what we thought of its chances at the close of 2014, we'd have said 'slim', but 2015 saw Apple deliver the first proper update to the iPod touch in three years, and it's now providing another entry ramp for the firm's £9.99 a month music subscription service. That alone means it makes sense to give it at least 12 months to prove itself. The same can't necessarily be said of the nano and shuffle, which are each available in just one configuration and, without streaming abilities, offer no ongoing revenue source.





# Best free iPad games

Fantastic free iPad games that won't try to rip you off

## Ascension: Chronicle of the Godslayer

To the casual player Ascension seems not dissimilar to Magic: The Gathering – you build and play from a deck of cards, each of which depicts a warrior, magician or relic of some kind, and use these to slay monsters and acquire both points and further cards. What makes it a ‘deck builder’ (like the classic card game Dominion, or the more recent Star Realms – which is also free and also worth a try) rather than a collectible card game like Magic is the fact that all





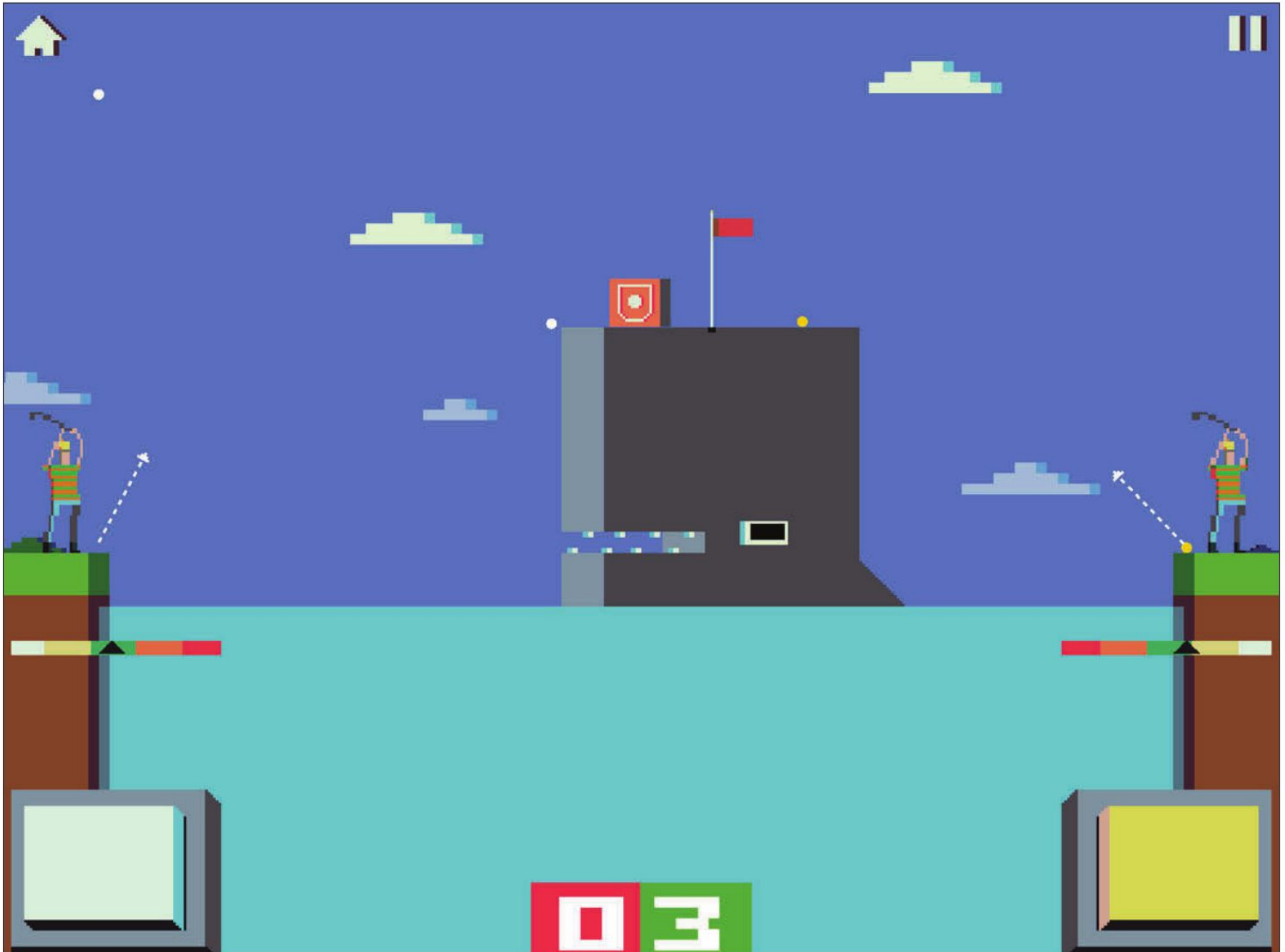
players start with an identical, very simple deck. You build your deck within the game itself.

It's all weirdly addictive, once you play a few times, and you needn't pay a penny if you don't want to: various single-time payments unlock new sets of cards and suchlike, but the free offering is perfectly decent. And while some reviewers have criticised the mostly rough-seeming art style, we find it all rather beautiful. **David Price**

## Battle Golf

Developer Colin Lane appears to be attempting to corner the market in ridiculous sports games. First, there was Golf is Hard, a side-on ball-thwacker





that required you to hit a hole-in-one every time, because it's clearly wrong and evil to walk on the grass. Then came Wrassling, a demented wrestling (of sorts) game that looked like it had fallen out of a Commodore 64. Now, Lane's returned to hitting tiny balls with sticks in Battle Golf.

Again, this one's all about holes-in-one, but putting greens now emerge from a huge expanse of water. You tap twice (to set angle and then power) and hope for the best. Hazards include hole-blocking seagulls and occasionally having to carefully aim for the top of a giant octopus.

Although perfectly fine in its single-player time-attack incarnation, Battle Golf comes into its own



when the ‘battle’ bit is added via the same-device two-player mode. Players face off at opposite edges of the water and frantically race to five points. As a bonus, you can temporarily knock out your rival by smacking them in the head with a ball, gaining you precious seconds to win a point without interference.

There’s only one IAP: £1.49 gets rid of the ads, although these are unobtrusive and don’t interrupt your games. Only flinging your (ex) friend’s iPad out of the window when they get a last-gasp fluky shot to win 5 to 4 can do that. **Craig Grannell**

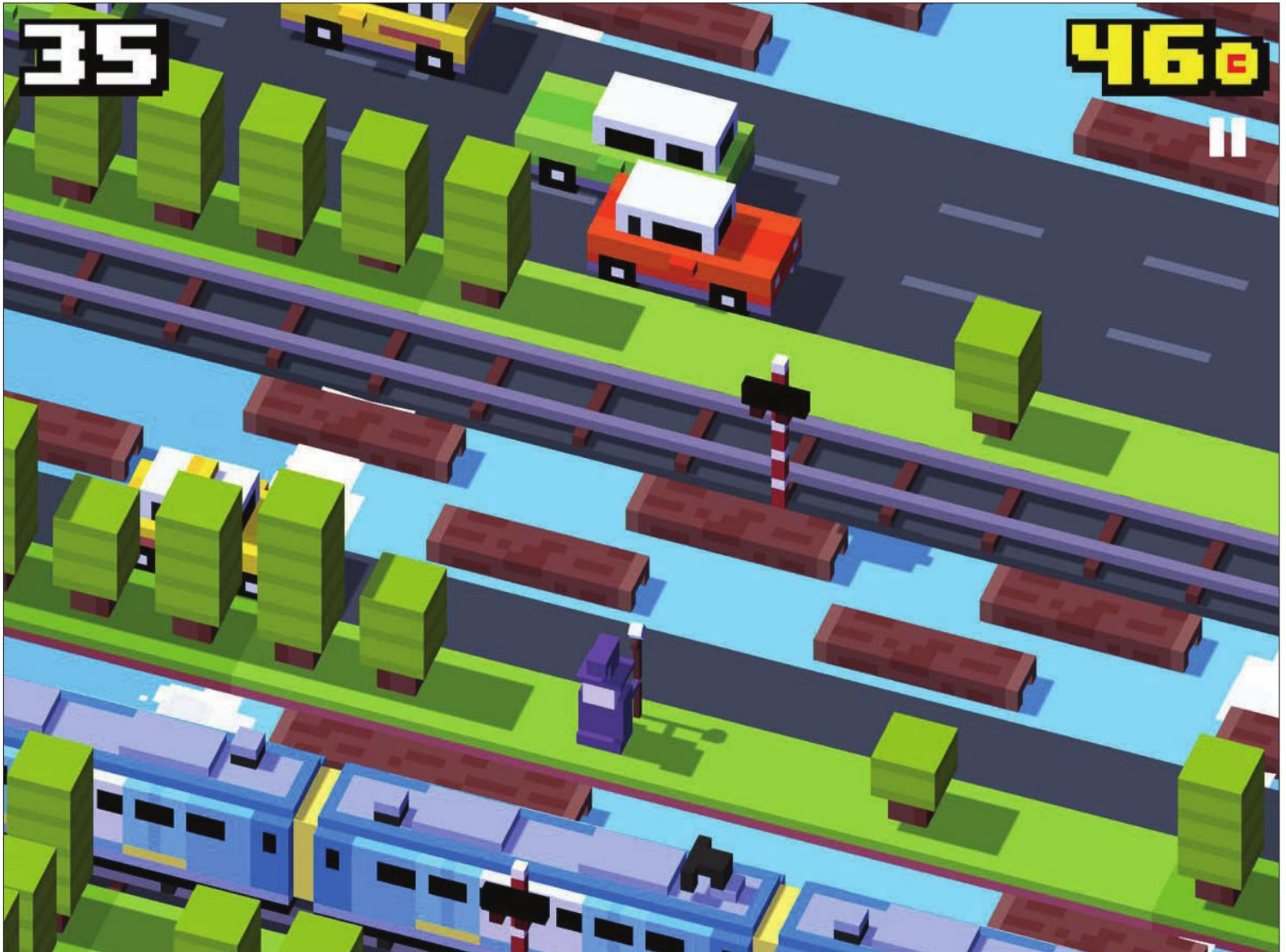
## Crossy Road

You’ve probably already installed smash hit Crossy Road. If not, do so immediately; and while you’re waiting, here’s why it’s one of the finest freebies on mobile. First, it’s dead simple and entirely intuitive. Imagine Frogger with isometric graphics and a single level that goes on forever. That’s perhaps not fun for the game’s protagonist, who must hop across endless busy highways, train-lines and rivers full of floating logs before inevitably being squashed/drowning/ending up on the front of the 8:24 to Paddington. But it’s great for you, because it’s an endless, infinitely replayable challenge. And the controls – tap to jump forward or swipe to move in any direction – are pitch-perfect.

Secondly, it looks gorgeous. The visuals are bright and cheery, to the point you won’t be too annoyed when your critter gets splattered (or grabbed by a bird of prey when you dawdle too long).

Finally, Crossy Road is the least obnoxious free-to-play title around, despite being packed full of collectables. Sure, you can pay IAP to get a new





character (of which there are many), but alternatively you can grab coins as you play, view an ad to swell your wallet, or even just do nothing at all and grin as the game generously lobs virtual cash in your general direction anyway. You can then try your luck on a one-armed bandit that will reward you with anything from a vampire that turns Crossy Road into a bleak landscape bathed in red, to 'Doge', whose antics are accompanied by lurid Comic Sans phrases. **Craig Grannell**

### Darkside

Outer-space mining colonies have it tough. They're surrounded by orbiting chunks of rock and under





constant attack from evil aliens. Naturally, you'd think The Company would send in a fleet of crack pilots to deal with such problems. Nope – it's just muggins again, taking on all and sundry single-handed.

The first thing that will strike you about Darkside is how stunning the game looks. As you fly over an asteroid's surface, it effortlessly rolls beneath you, structures and rocks rotating away into space. The second thing you'll notice – very quickly – is that space is really dangerous. Every rock you blast splits in two, Asteroids-style; enemy craft flit about, daring you to shoot them. Occasionally, you'll collect a power-up, but you'll more frequently find your ship becoming one with the universe after having been

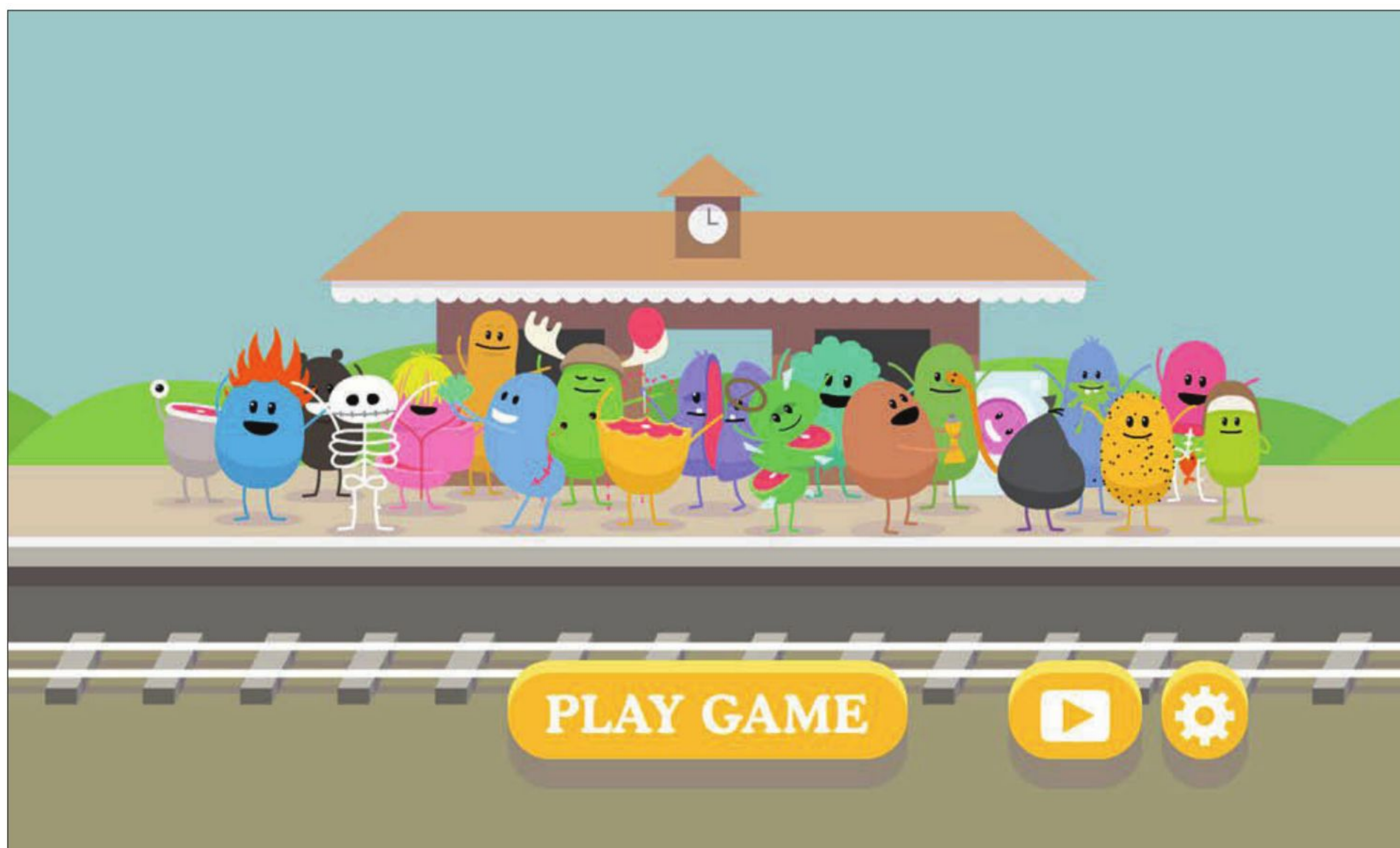


atomised. Rather generously, you get the pulsating arcade mode entirely for free. For the reasonable sum of £1.49, you can unlock Survival (one life) and Missions (100 varied objectives) modes; as an added incentive, this also unlocks smart bombs for your ship – ideal for when things get hairy. **Craig Grannell**

## Dumb Ways To Die

We always encourage players of free iPad games to consider the question: “How are the developers making money out of this?” If you’re not paying directly, is their play to sell you in-app purchases, show you adverts, or harvest your data? Or are they just trying to grab a big user base before ‘monetising’ later?

Some games, however, are created by non-profit, publicly funded or charitable organisations, and can be given away for free without any strings





attached (except well-intentioned ideological ones, probably). Dumb Ways To Die was commissioned by Metro Trains Melbourne in order to raise awareness of railway safety, and a proportion of its macabre puzzles involve helping the characters avoid being sliced in half by trains. But the makers didn't feel the need to stick too closely to the brief, and the theme meanders off all over the place. It's brilliant.

It's fun, and funny, and fast – each puzzle lasts just a few seconds, before you're whisked off to the next. There's not enormous depth, but it's definitely worth a go. **David Price**

## Fold the World

With iPads being all about pawing at a glass surface, some games have made a concerted effort to reconnect gamers with something that feels a bit more tangible and tactile. In Fold the World, you're exploring the Paper Kingdom, leading strange bouncing critter Yolo along pathways that shift and change underneath him, depending on how the paper puzzle is folded.

On playing the game, it will probably come as no surprise that Fold the World's puzzles were initially fashioned out of paper, before being digitised and fine-tuned inside the computer. Such attention to detail is evident, and it means you never feel cheated. Although some of the puzzles are proper head-scratchers, with you folding the paper this way and that, there's always seriously solid logic underpinning everything. (That each level is only as big as your screen makes it all the more impressive that the pathways Yolo can take become so deviously and deliciously complicated.)



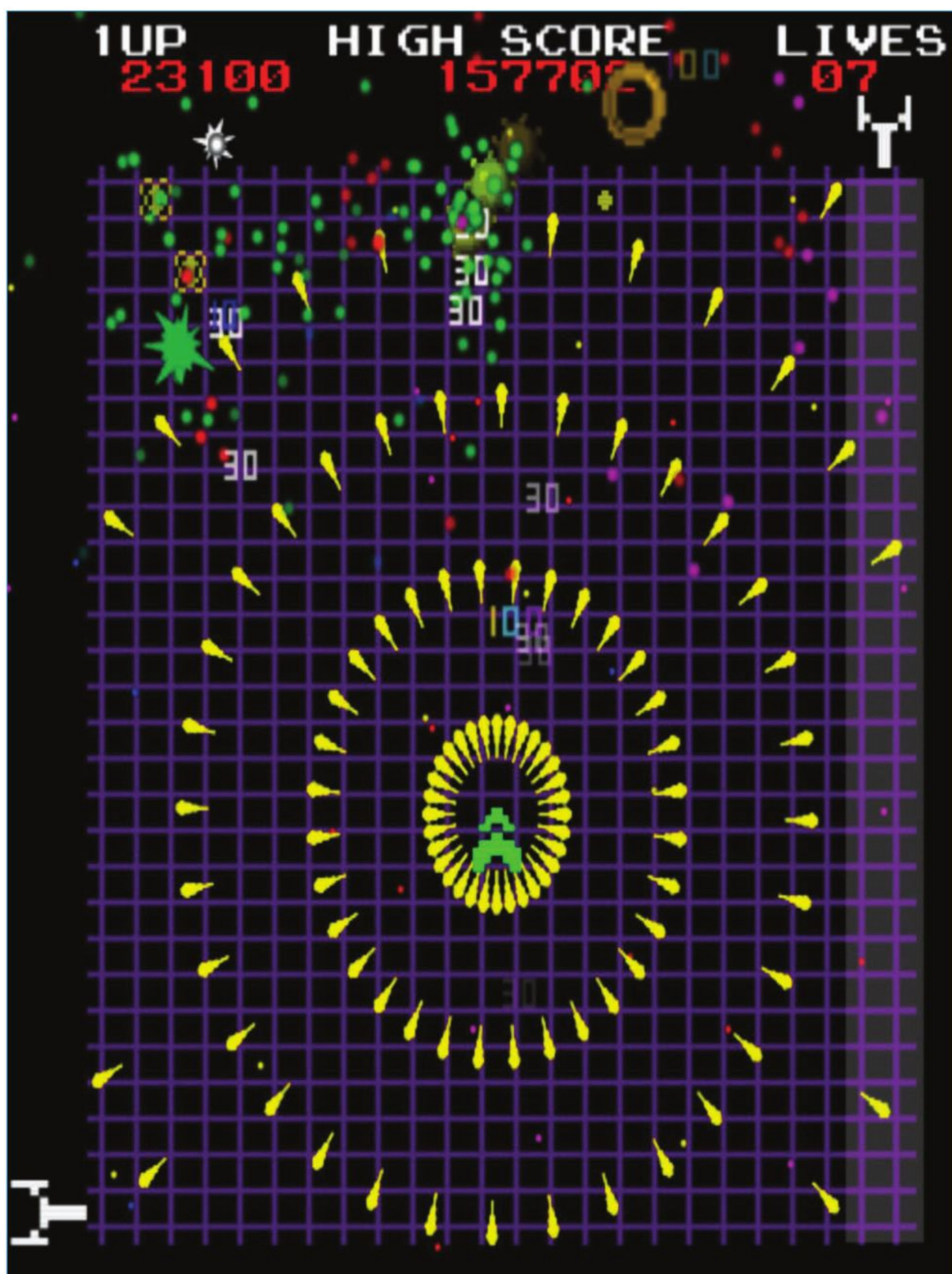


For free, you get 20 levels of adventuring, which should keep puzzle fans happy for a good long while. Should you hanker for more papery goodness, two further sets of levels can be purchased for 79p each. (Note that the game also has a hints system, replenished using gems. Buying them isn't necessary, and you can get gems for free by watching video ads.) **Craig Grannell**

### Gridrunner

The original Gridrunner, which appeared on Commodore's VIC-20 (which had all of 3.5k of RAM to play with) back in the early 1980s, was a high-octane shooter that found your tiny ship inside a





claustrophobic single-screen grid, attempting to repel snake-like strings of droids weaving back and forth across the screen. When shot, they'd split in half, any dead pieces becoming time bombs. All the while, lasers roamed the grid edges, taking pot shots. Survival wasn't easy.

Fast forward to Gridrunner on iOS, and everything's ramped up further. The snakes, lasers and grids remain, but are joined by all manner of spacecraft intent on your destruction. Psychedelic and awesomely powerful (but temporary) power-

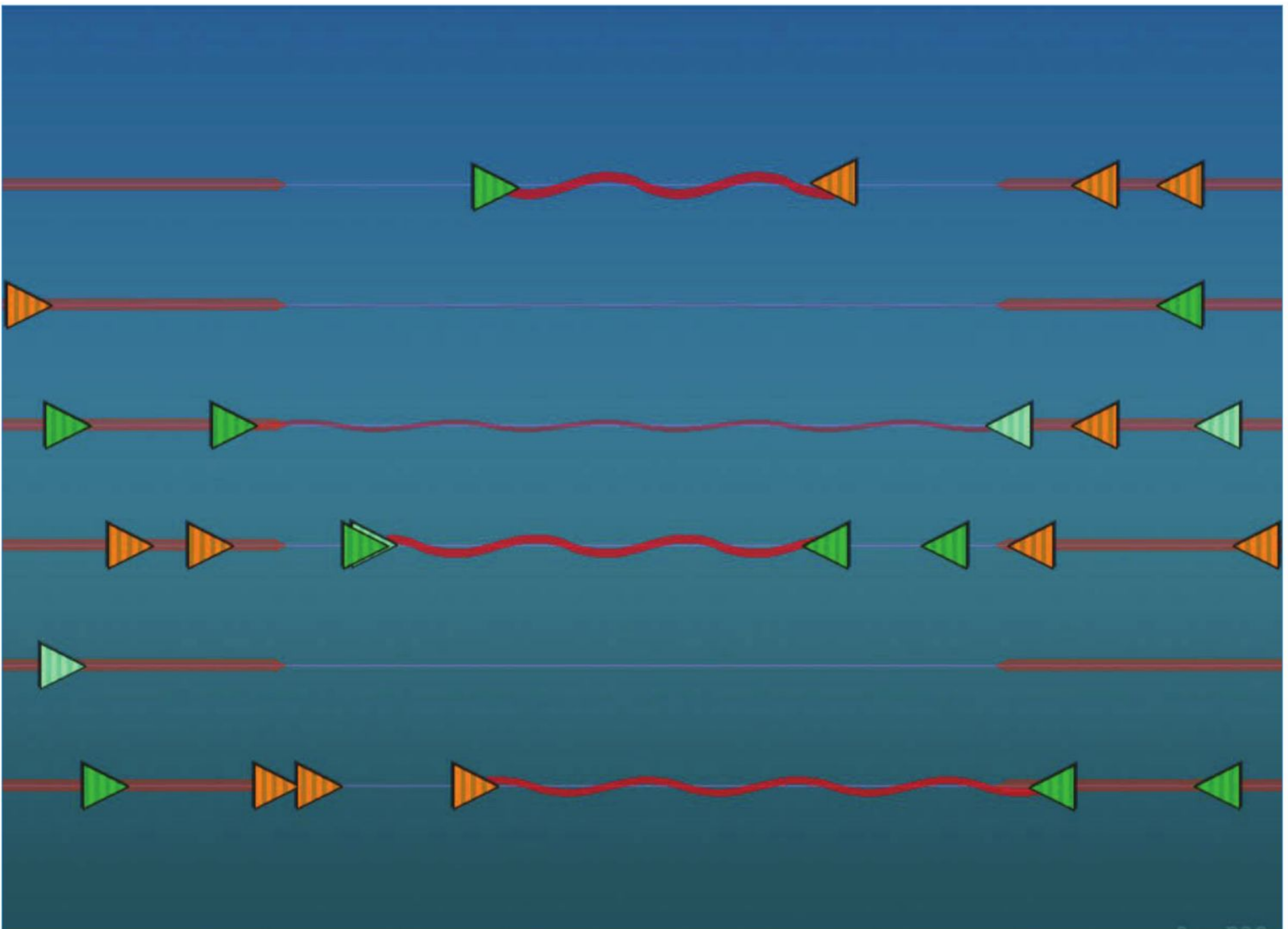


ups provide merely brief respite, in one of the most exhilarating and exciting shooting games available on any platform. **Craig Grannell**

## Halcyon

Before he made whatever passes for the ‘big time’ in iOS gaming with SpellTower, developer Zach Gage’s creative approach arrived from a rather more arty direction; and never was he artier than with Halcyon. In theory, it’s a match game, but it’s also an instrument – your actions augment a generative soundtrack, making for unique compositions in every game.

The matching itself involves coloured currents – triangles that move along horizontal strings.





You draw lines between the strings, so like-coloured currents meet, whereupon they plink and vanish. Everything ends the second two different currents meet, creating disharmony in Halcyon's ordered world. There are 36 levels across four environments, along with two endless modes that dynamically adjust their difficulty, based on your skills. The only downside is that this is a fairly old iPad game that hasn't been updated since 2011. So you must skip past sign-up for a now-defunct gaming social network and also make peace with the lack of high-res graphics. But once you're immersed in the world of Halcyon, you'll be hypnotised for hours. **Craig Grannell**

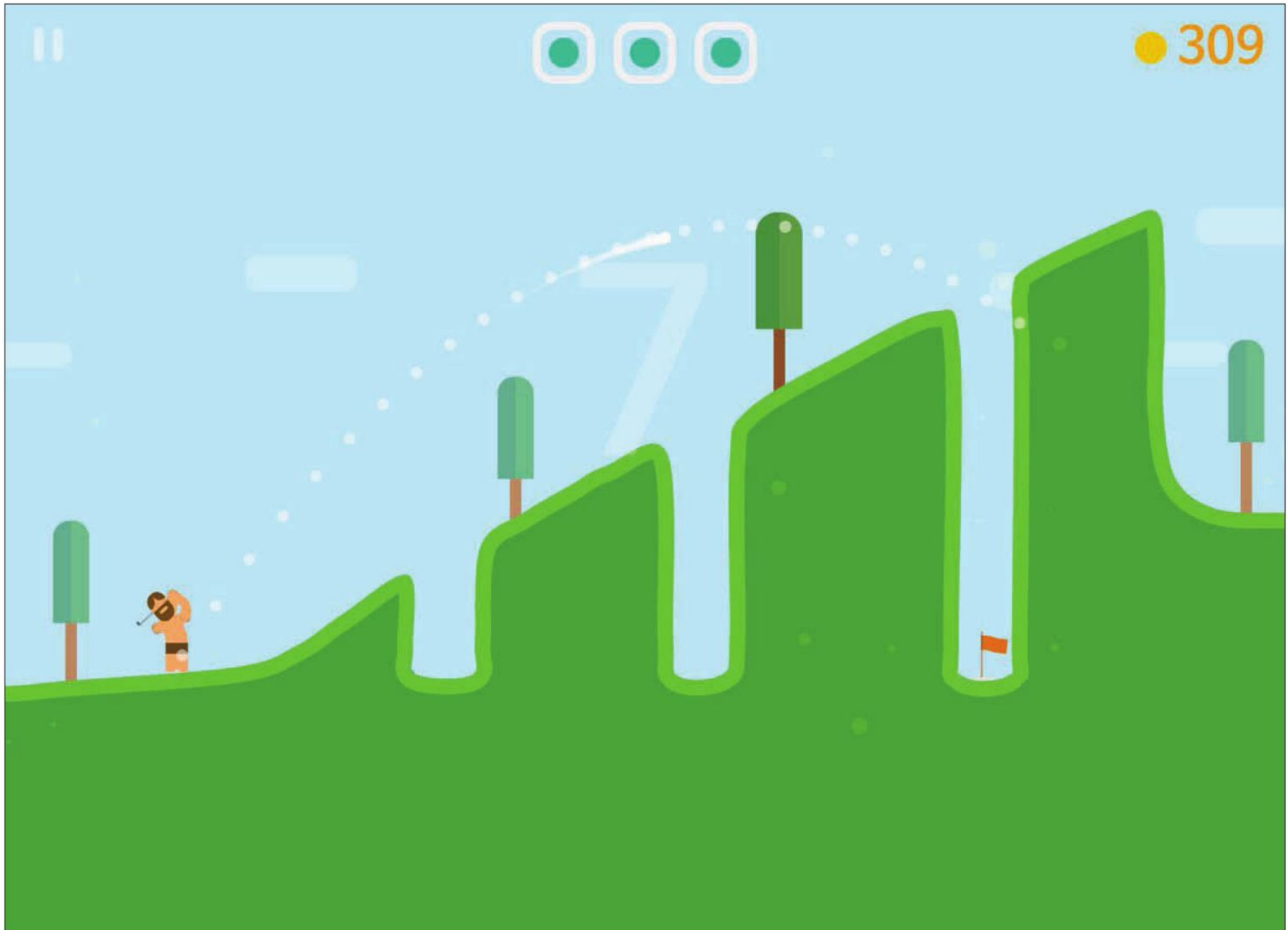
## Lonely One

It's just a bearded guy and his pants against an endless number of distinctly strange putting greens in this oddball golf 'em up. The aim is to get a hole-in-one with every shot. Fail three times and it's game over. Land a direct shot and you get a life back; for some reason, excitable gnomes also celebrate your amazing playing.

It's a pleasantly noodly affair – a perfect lean-back side-on golfing experience. You drag a finger to draw an aiming arc, sliding to the edge of the screen if you need to cancel a shot. Occasionally, wind adds some complexity to proceedings, but it's the strange-shaped greens that cause the most trouble, not least ones resembling animals or the head of a knight.

As is seemingly law these days, Lonely One offers collectables. You get coins for successful putts, and 500 can be used to win a randomly selected character that may alter the game's visual





appearance. You can also buy these outright if you wish, but there's really no need. The game's at its funniest with the beardy golfer in his trousers anyway. **Craig Grannell**

### Lunar Flowers

We feel like lobbing a paintbrush at people who tirelessly argue about whether games are art; however, there can't be any argument that some games are very artistic. Lunar Flowers is a case in point. Although it's technically a puzzle game, it's very slight; mostly, it's more like an interactive journey, with you following the adventures of a princess in a delicate and beautifully illustrated moonlit world.





Although the visuals and audio evoke wonder, Lunar Flowers truly shines through the sense of exploration it affords. Even though the journey is linear and every moment and reaction canned, you need to discover how to move onwards. Only rarely is there any hand-holding, and your brain sometimes gets quite a workout when the puzzles become rather more abstract.

Perhaps the only disappointment is the brevity of the journey – you'll reach the end within an hour or two. But along the way, you'll have ridden a dragon, drawn stars in the sky, and had a surprisingly intense battle against floating lanterns, while attempting to cross a river. **Craig Grannell**





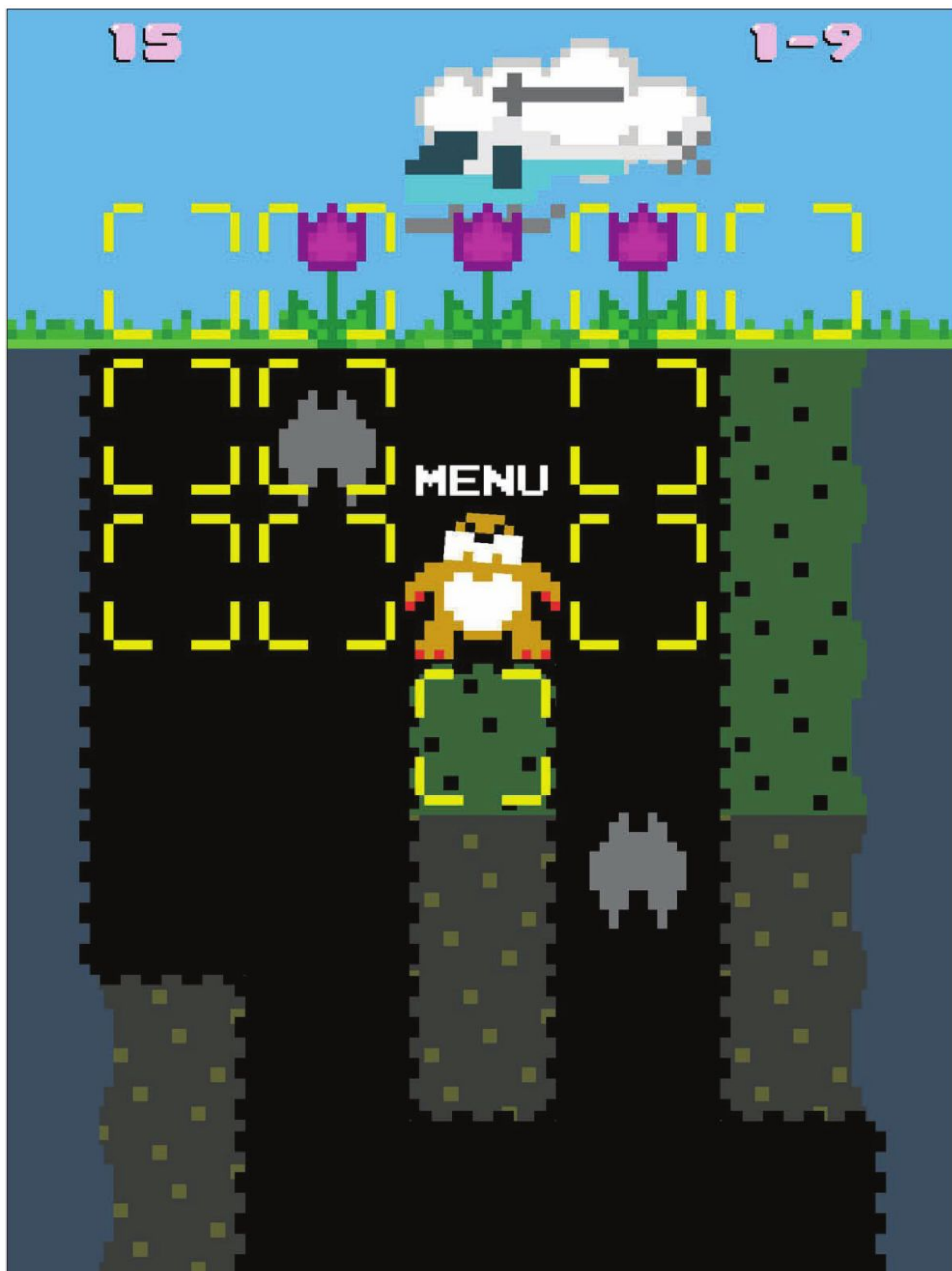
## Middle Manager of Justice

Middle Manager of Justice is a superhero-themed base-building game in which the heroes are preening, stereotype-spouting goons who divide their time between punching thugs, watching TV and manning call centres. You're abstractly their middle manager, working out where best to spend the squad's pitiful income while assigning your heroes to dole out fist-based justice to assorted evil-doers. Utterly shallow, but the game is aware of that - which is why it works so well. **Alec Meer**

## Mr Dig

We're not sure what's going on in Mr Dig. The story has a kind of 1980s video game logic,





where the titular Mr. Dig has “dug too deep”, unleashing monsters on the underworld; rather than ravaging humanity, said monsters are apparently kleptomaniacs and “took his stuff”. You must therefore venture underground in single-screen levels to liberate Mr. Dig’s fortune, which appears to mostly consist of giant gems and fruit.

Usually, you’d expect this kind of game to echo ancient arcade titles such as Boulder Dash or Dig Dug in terms of how it plays, but that’s not the case here. Instead of the kind of frenetic



arcade fare that's ill-suited to iPad, Mr Dig takes a turn-based approach. Yellow squares show where your digging hero can reach, and you tap to move. You must be careful to time movements to avoid roaming monsters, and also to leave a path back to the surface. The heroes here are apparently pretty good at leaping about, but they're not blessed with jet-packs!

The result is a charming, silly and surprisingly challenging puzzler that feels quite fresh, despite its chunky and clunky old-school visuals. **Craig Grannell**

## Only One

Only One is a silly fighting game with simple, retro graphics, entirely set on top of a circular plateau.





Villains continuously spawn and attack you, and it's your job to slash them to death with your sword or push them over the edge. We recommend the one-off in-app payment – Ultimate Power – that gives you a permanent power multiplier and unlocks all the abilities, but you can have a great laugh without spending anything. **David Price**

Sage Solitaire

Developer Zach Gage asks why, when you have a mobile device that's not the size of a table, most





traditional solitaire efforts ape the typical Klondike and FreeCell layouts, using tiny cards (in order to fit them all on the screen) and overly familiar strategies. His answer: a three-by-three grid, quite a bit of poker, and a virtual trip to Vegas.

In the basic Sage Solitaire game, you score by removing poker hands. The better the hand, the more points you get. Strategy comes by way of a rule that states you must use cards from multiple rows for each hand. With the stacks at the top of the screen being taller than those at the bottom, the latter's cards are best used sparingly. In addition, a randomly allocated suit is set as a multiplier, bestowing double points when one or more of its cards is used in a hand, and two 'trashes' exist to remove individual cards; one is replenished after each successful hand.

The Vegas mode, unlocked on clearing the entire board three times, gives you a virtual bank account, awards cash prizes only when using the multiplier hand, and ups your overall payout multiplier on clearing piles from the top two rows. Subtly different strategies are required for success, hence the initial lockdown – it's very easy to otherwise burn through your limited funds. But once you crack Vegas and hit \$800, you can try your hand at True Grit. There, once your in-game money's gone, it's gone for good.

Note that there's no horrible IAP to refill your virtual coffers. The game's sole IAP (£2.29) exists purely to unlock two further modes (Double Deck and Fifteens), remove the (unobtrusive) ads, provide stats tracking, and give you achievements to aim for. **Craig Grannell**

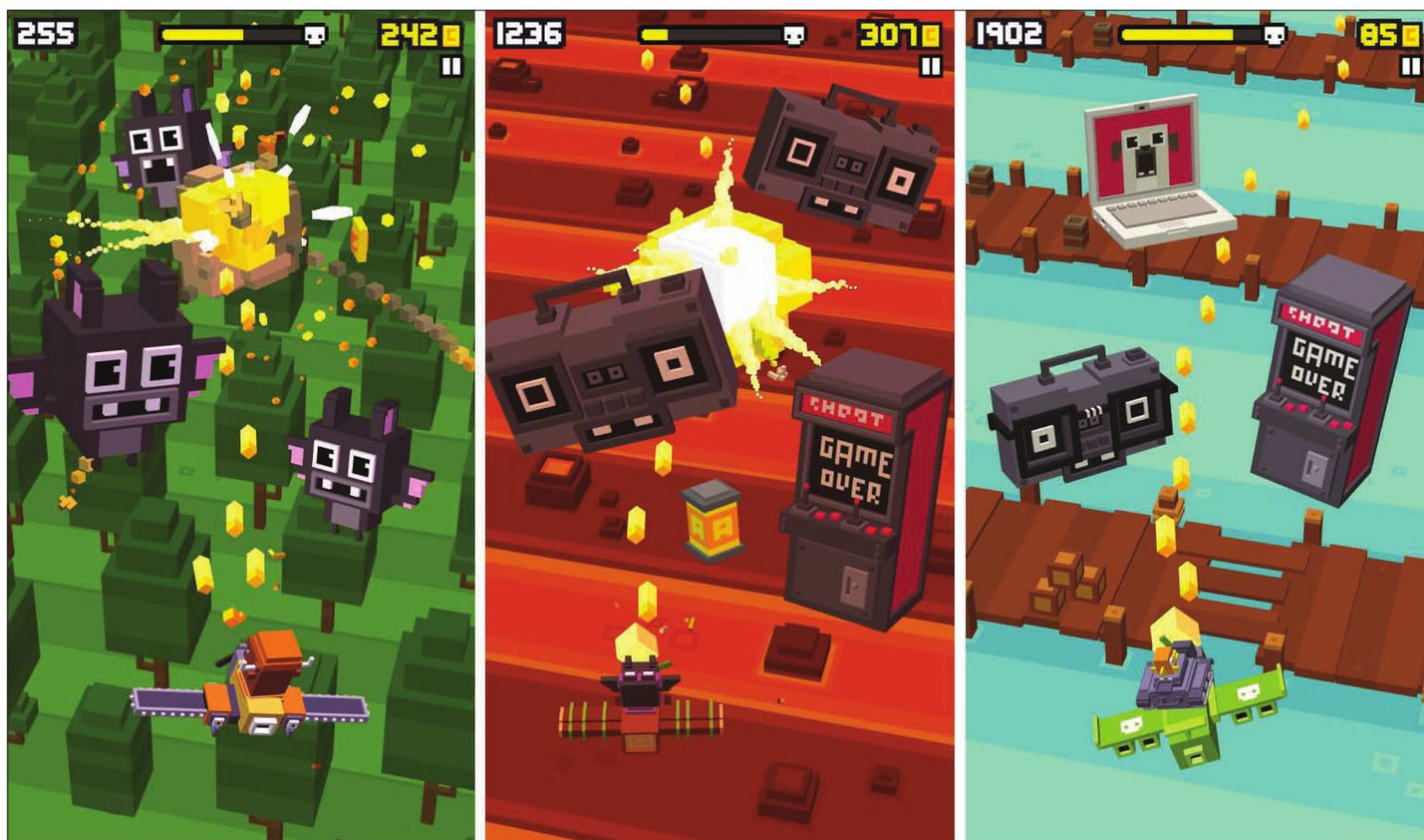


## Shooty Skies

"A giant beaver is approaching," warns Shooty Skies, as your DJ cat in a biplane prepares for battle.

The beaver begins spewing spinning axes and giant acorns, any of which would bring instant death. You drag your finger to make your plane deftly weave between these projectiles, admiring the beaver's surprisingly awesome firepower - and, frankly, its ability to fly in the first place. Occasionally, you pause to charge your super-weapon, which lets rip the second you move. The beaver defeated, you mull over the fact that this strange scene isn't even close to the weirdest you've experienced within this very flight.

Shooty Skies, then, is a shooty game set in the sky. Think: old-school vertically scrolling blasters. But this one has a decidedly oddball bent. Strange cartoon characters in biplanes are attacked by





memes and angry technology (arcade games that fire joysticks; enraged cassette decks; demented robots). The aforementioned super-weapon mechanism adds a dash of risk-versus-reward (you're vulnerable when stationary, but can clear the screen with the weapon's superior firepower). And everything's wrapped in a gorgeous if familiar visual style you'll recall from Crossy Road. (The teams for both games had lots of crossover, note – this isn't some third-rate knock-off.)

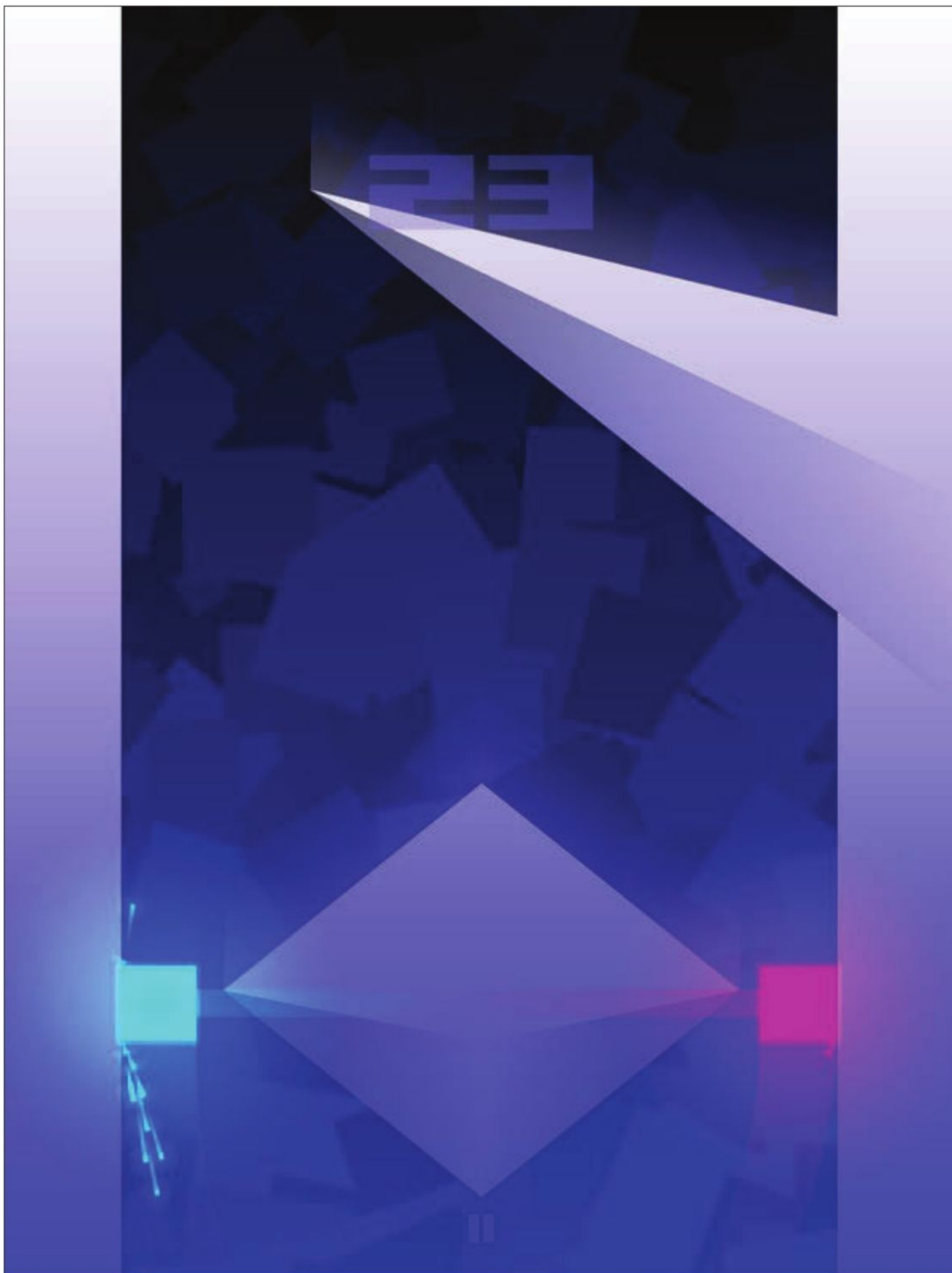
As in Crossy Road, you can unlock characters using a prize system or real cash. But there's nothing at all here that will ever pressure you into spending money. Shooty Skies is a generous and instantly playable game. **Craig Grannell**

## SHREDD

Addictive in the classic 'just one more go' sort of way, striking-looking if not classically handsome, expertly honed and unapologetically simple, SHREDD (formerly known as dEXTRIS) tasks you with making two coloured squares follow a never-ending corridor without bumping into the jagged shapes in your way. There are only four possible 'moves': leave the squares to sit in the middle (press nothing); send them both to the left or to the right (press on either the left or right side of the screen); or split them, as in the screen image below (press with both thumbs at once). And then things simply get faster and faster.

There are in-game adverts, which are mildly annoying, but the gameplay is strong and there's a lovely old-fashioned feel to the way you'll find yourself chasing high scores; in no other iOS game





have I found myself so obsessed with the rankings on Game Center. **David Price**

## Smash Hit

This first-person shooter – which has more than a hint of the classic nerve-fraying endless runner about it – offers no enemies to shoot except the pleasingly destructible glass and stone obstacles in



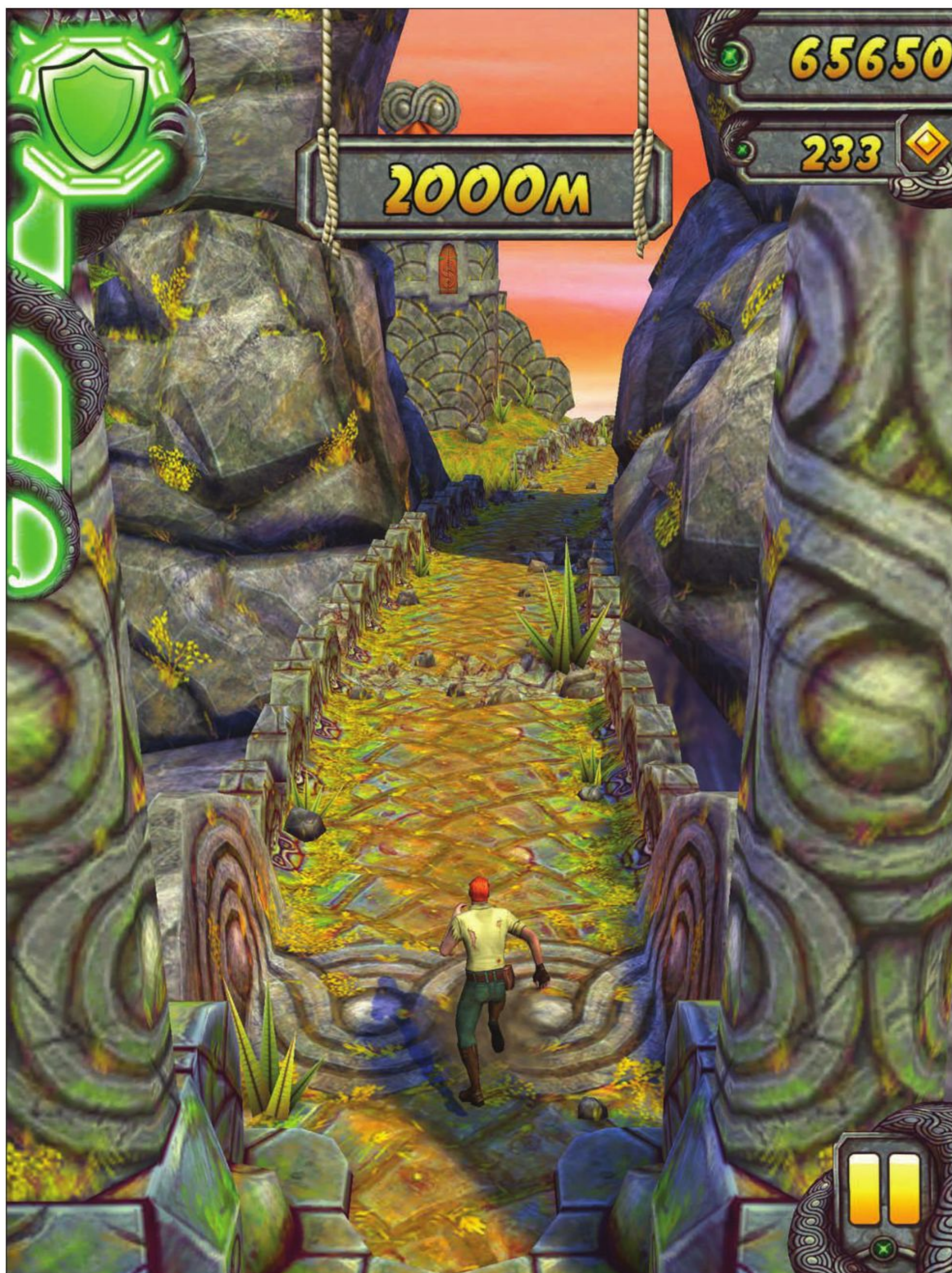


front of you, which you need to shatter before you run straight into them. The graphics are a triumph, as is the satisfying gunplay: your bullets (more like oversized marbles) describe looping trajectories and make a lovely racket when they strike home. Simple and fun. **David Price**

## Temple Run 2

Like the ubiquitous first game, Temple Run 2 is a simple 'auto-runner' in which you're forced to make snap reactions as your fleeing Indiana Jones-alike is propelled ever onwards at increasing speed: striving to dodge walls, fatal drops, spikey boulders and an enormous pursuing monkey-monster. Death is inevitable, as is having 'just one more go.' **Alec Meer**



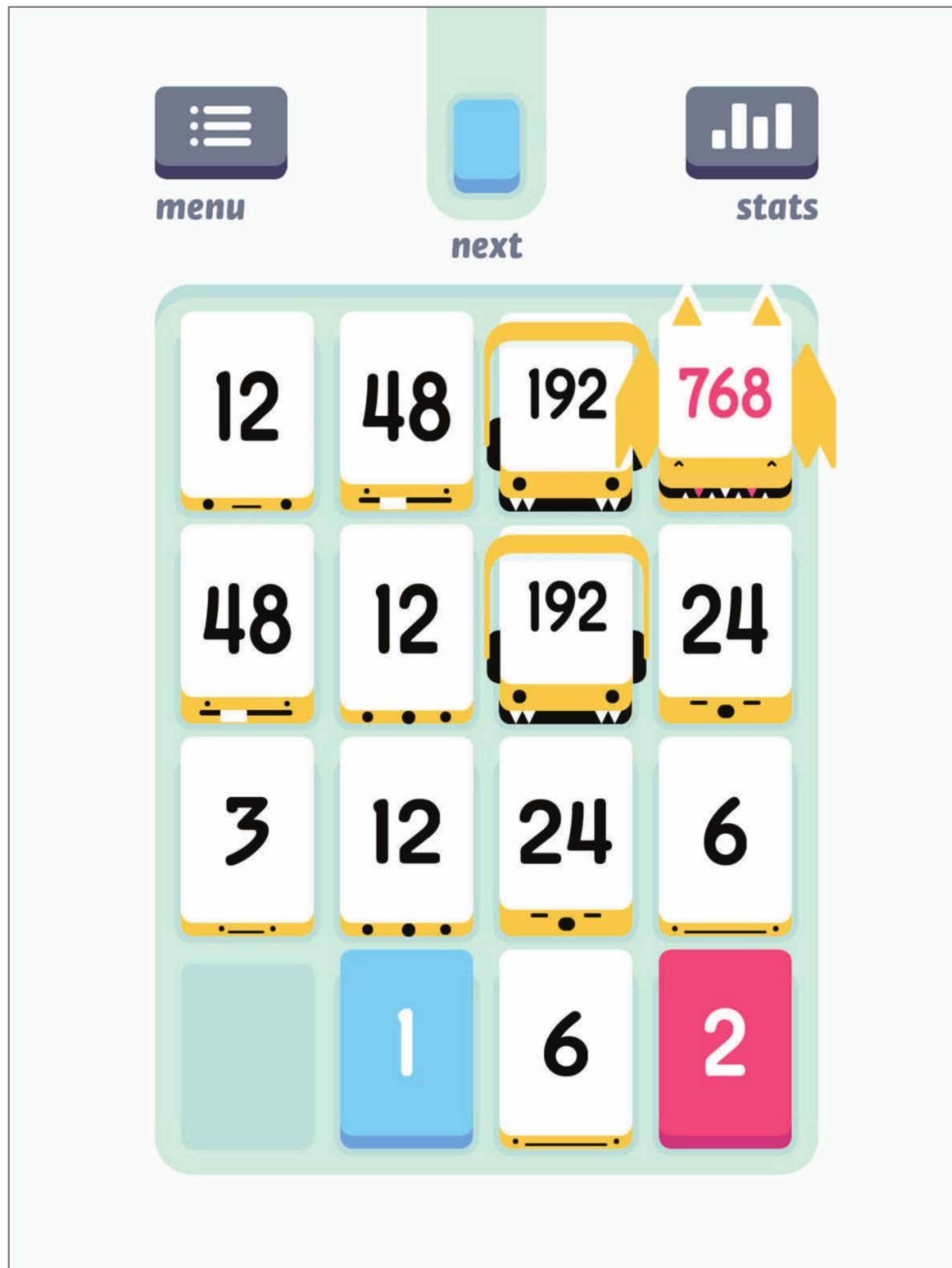


## Threes! Free

Every platform needs its perfect puzzle game, and on release Threes! made its claim to be that for iOS. As with all brilliant examples of the genre, Threes! has at its heart a simple mechanic, which in this case involve merging cards within a tiny four-by-four board. But it's the details that propel Threes! beyond the competition.

The idea is to match numbers. Slide a blue '1' into a red '2' and they combine to become a single '3'. Two 3s make a 6. Two 6s make a 12. And so on. The





snag is that every move you make slides every non-blocked tile on the board as well. If you're fortunate or have planned ahead, this can result in several merges in one move; if not, you end up with a mess to clear up. And since after every turn a new card enters the board in a random spot on the edge you swiped from, planning is key.

It takes a few games for Threes! to properly click, but once it does, it never lets go. You'll be dying to see new cards (each is infused with a unique personality), and will soon spot how reaching higher-



numbered cards boosts your score substantially. The free-to-play aspect is also generous: watch a video ad and you get three more games in the bank, which can be built up into a substantial reserve.

This gives the game a fighting chance against a raft of inferior Threes! clones (most of which have 1024 or 2048 in their names) that litter the App Store, and sucked life out of the paid version of Threes! Our advice: stick with the original; you've no excuse now you can play for free. **Craig Grannell**

## Triple Town

Triple Town's premise is simple: you're building a town on a 6 x 6 grid filled with bushes and trees. You do this by grouping items into threes: three

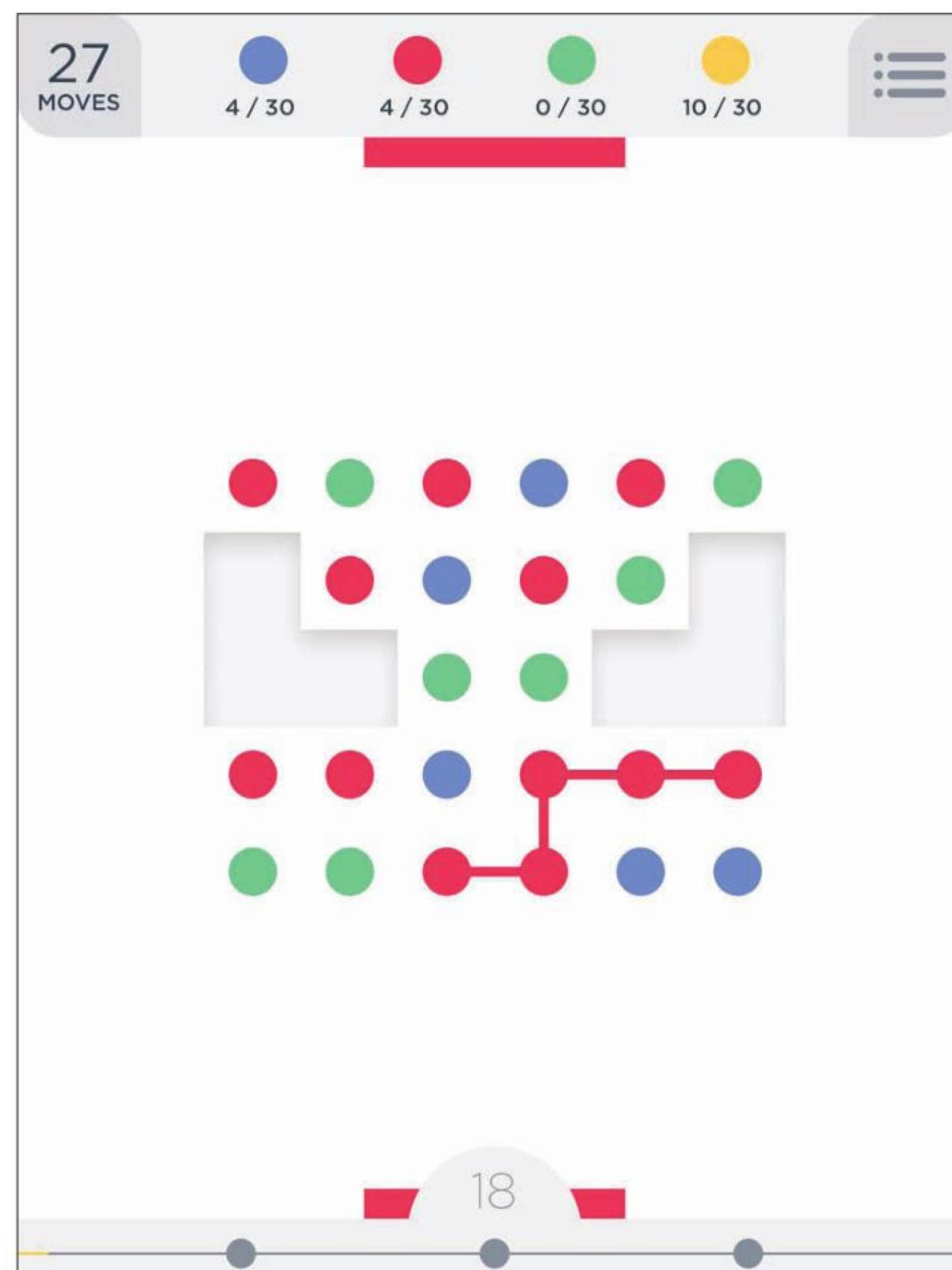




trees become a hut, three huts become a house and so on. Trap the game's 'enemies' – adorable bears – and they turn into grave stones, three of which make a church. The whole thing is fresh, addictive and challenging: if you think you've seen everything Match 3 has to offer, you're in for a surprise. **Alan Martin**

## Two Dots

Simple but addictive. Two Dots is all about tracing lines between adjacent dots of the same colour, thereby causing them to disappear and further dots to drop down from above. To pass a given level you need to eliminate a certain number of dots of each colour, along with additional elements such as anchors. It's fun to play and beautiful to look at, but watch out for the clever catch: die five times and



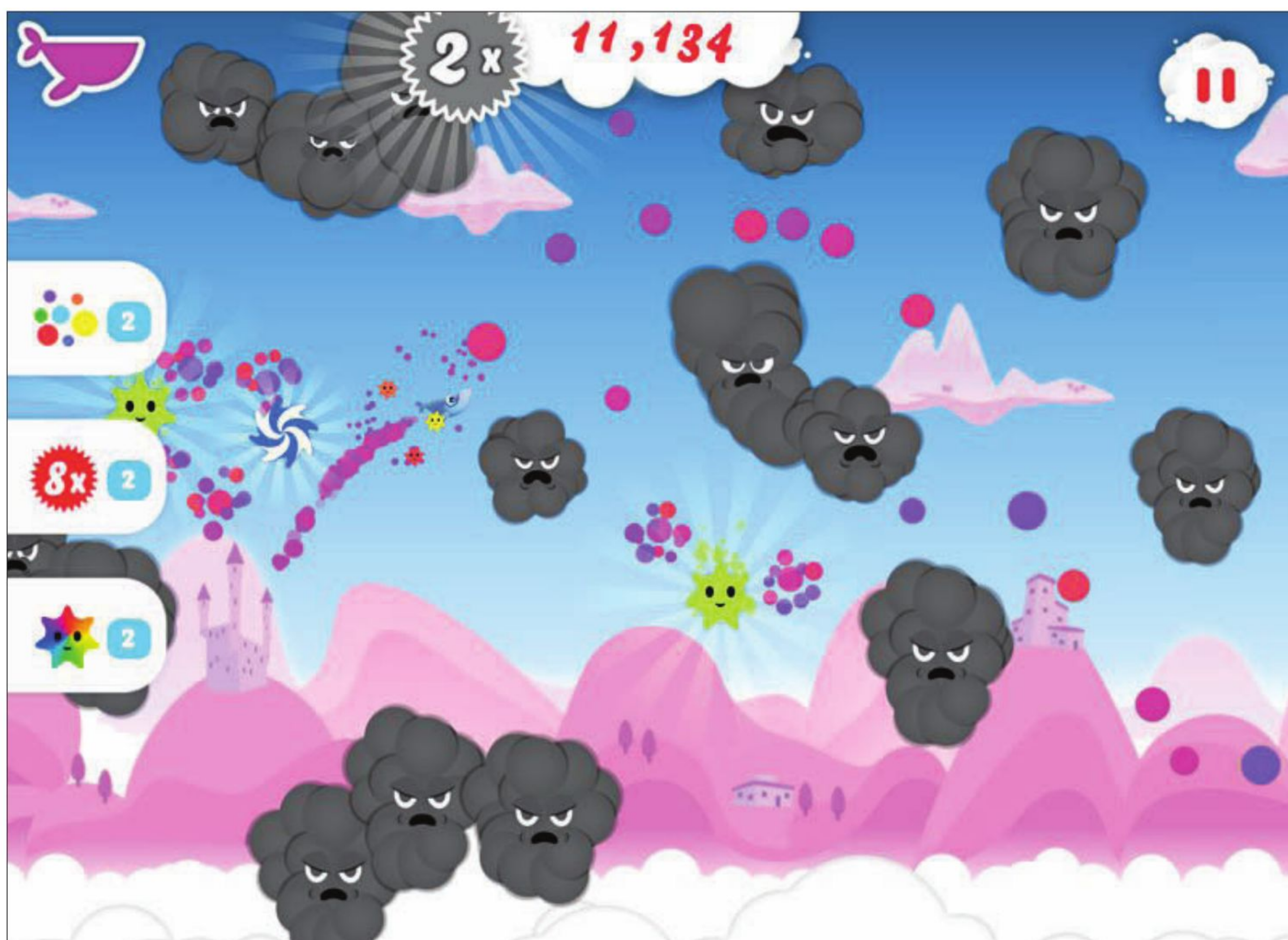


you'll have to wait for your lives to recharge... or pay to get more. That's where they'll get the money, and if you have weak self-control, you may find yourself coughing up. **Amy Moore**

### Whale Trail

It might not have the deepest replay value, but since going free-to-play Whale Trail's charms have been harder to resist. It's a one-button game, with a mechanic that's close to Tiny Wings in reverse: tap the screen to fly upwards, release to swoop down. You need to avoid the clouds and collect fuel of some kind.

It looks delightful, the gameplay is well-crafted and there's a wicked soundtrack too. **David Price**







# Best free iPhone games

Brilliant games that won't cost you a penny

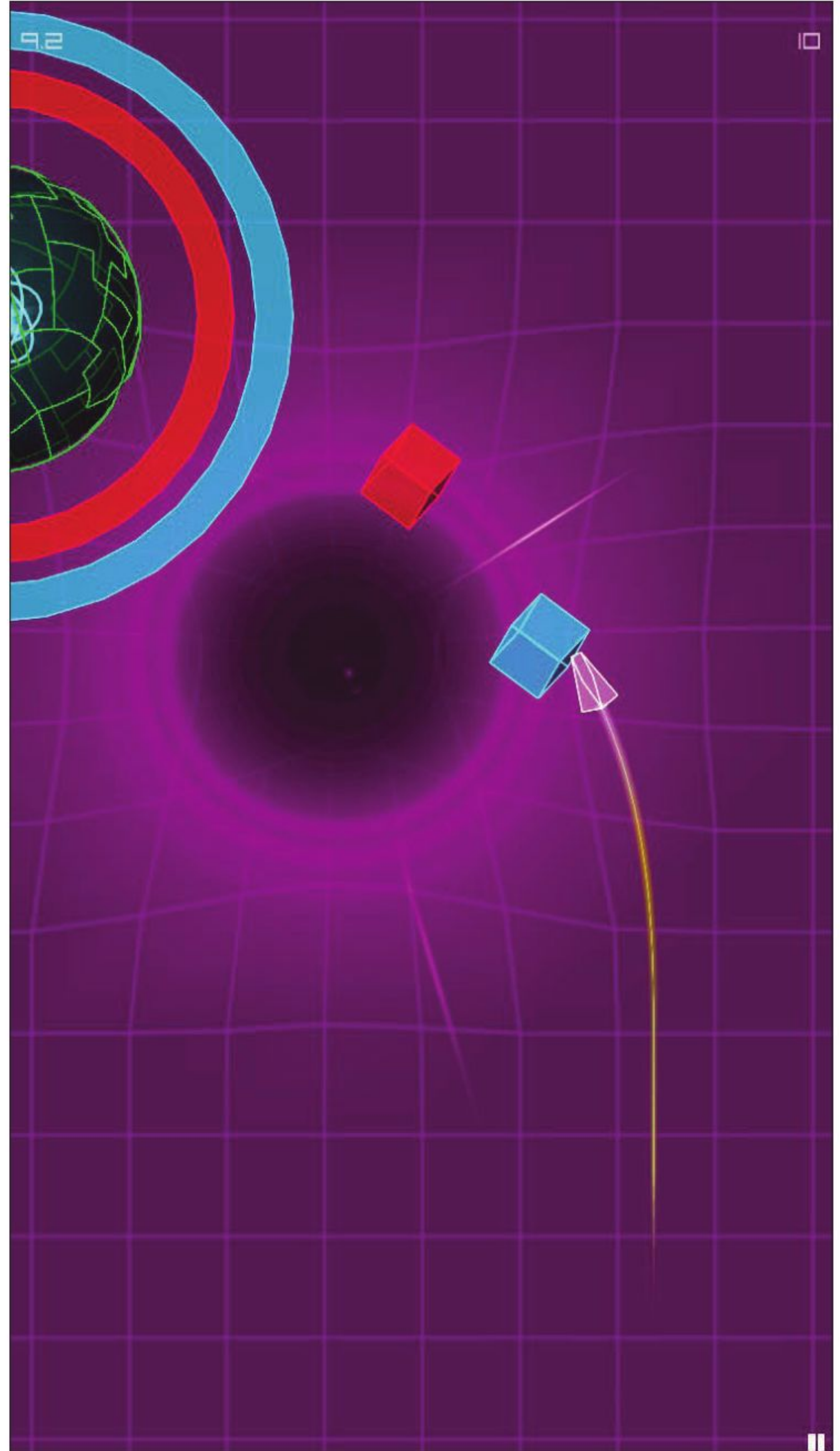
## **AGRAV: Inertial orbit**

In the iPhone's early days, it was the games that had you directly manipulate on-screen content that most excited. They felt like a slice of the future, rather than awkwardly trying to give you some kind of on-screen joystick. AGRV takes the former approach, having you direct a tiny spaceship about the place by using your fingers to fashion black holes.

It's a beautifully simple system, but in practice AGRV can be frustrating, purely because it's so different. Initial tries will almost certainly find your craft smashed to pieces on hitting the edge of the screen, or zooming past the goal, in a manner that sets teeth gnashing.



But once it clicks, AGRAV becomes a compelling game. Soon, you'll be carving out elegant arcs by touching the screen at precisely the right moment; a second black hole in front of the ship will urge it on, to beat time limits. Eventually, you'll be deftly avoiding obstacles, grabbing pick-ups, and learning the benefits of multitouch on the more complex stages. For free, you get 30 to tackle; a single IAP unlocks another 60 if these virtual black holes suck you in. **Craig Grannell**

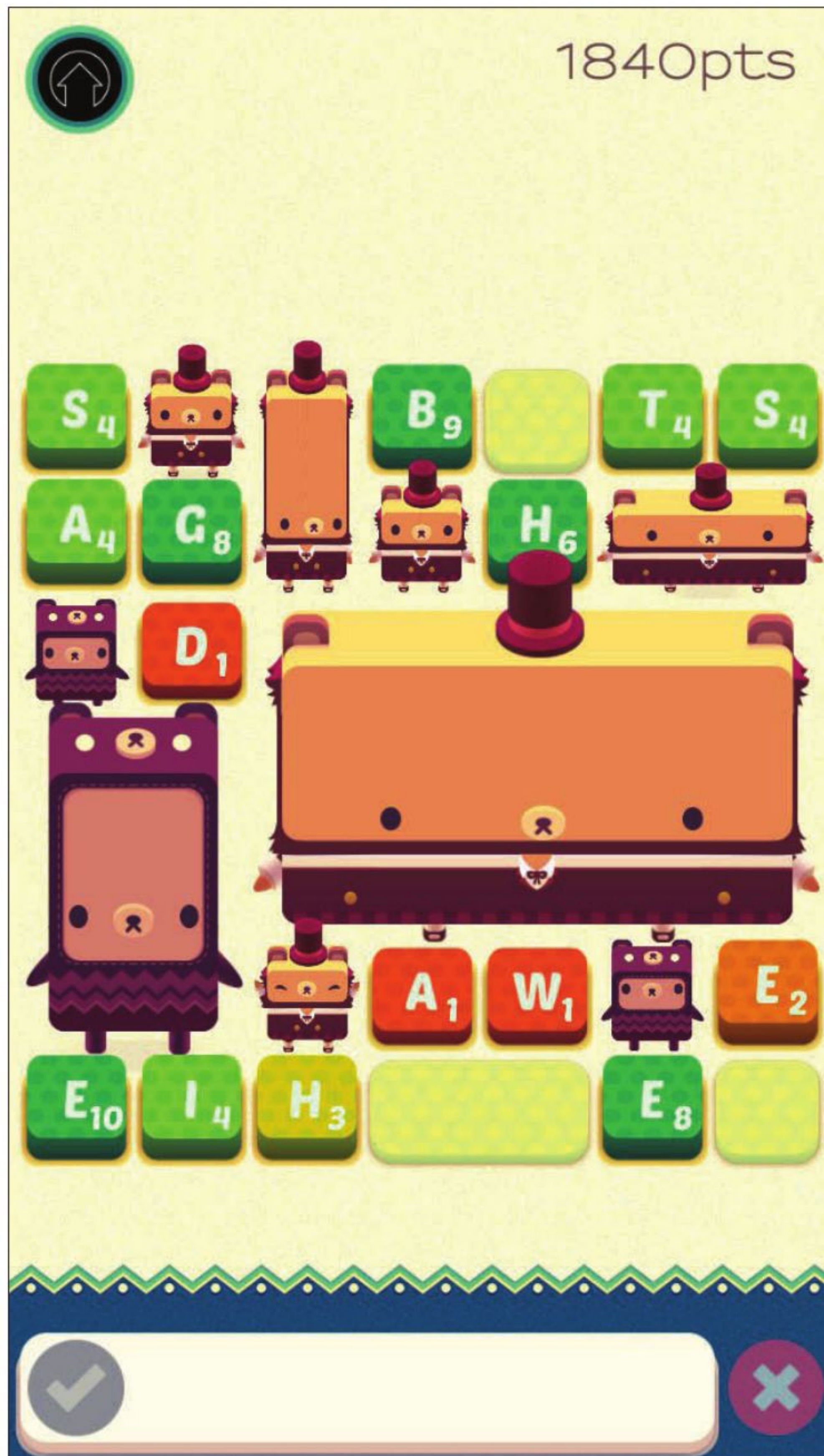


## Alphabear

Another word game? Yes, but this one stars bears! Even better, it's really, really good, and dead easy to get into. You start out with a board with some letters on. Tap out a word and the space the letters took up is immediately replaced by bears, which are instantly surrounded by more letters.

Added complications arrive in the form of countdown timers. Letters start out as green, and then if unused over subsequent goes turn yellow, orange and then red. Ignore red letters at your peril,





because they transform into rocks, blocking bears from expanding.

You might wonder about the use of ‘expanding’ and ‘bears’ in that previous sentence, but we haven’t erred – the bears in Alphabear really do stretch to fill available space. So you’ll get tall and thin bears, weirdly wide and squat bears, and there’s the holy grail of the ‘filling the entire screen’ bear if you clear all of the letters. At the end of a round, such giant beasts result in huge scores and immense satisfaction.

There are some minor drawbacks to the bear-oriented antics. The game requires a constant internet connection for online sync, and there are in-game currencies – one essentially for ‘energy’ to enter new rounds and the other to skip ahead by more rapidly accessing treasure events. It’s there you discover especially rare bears with special powers that seriously boost your score in various ways when selected before a new round; but this mechanic serves more to over-complicate the game than improve it.



Still, for free, you can play a couple of really fun rounds per day, and there's always an 'infinite honey' IAP (£3.99) if you can't stand to wait for your next furry fix. **Craig Grannell**

### Bejeweled Blitz

This ultra-moreish puzzle game takes the 'match three' mechanic and squashes it into minute-long blasts of dazzling colours and crazy point tallies. It's astonishingly addictive.

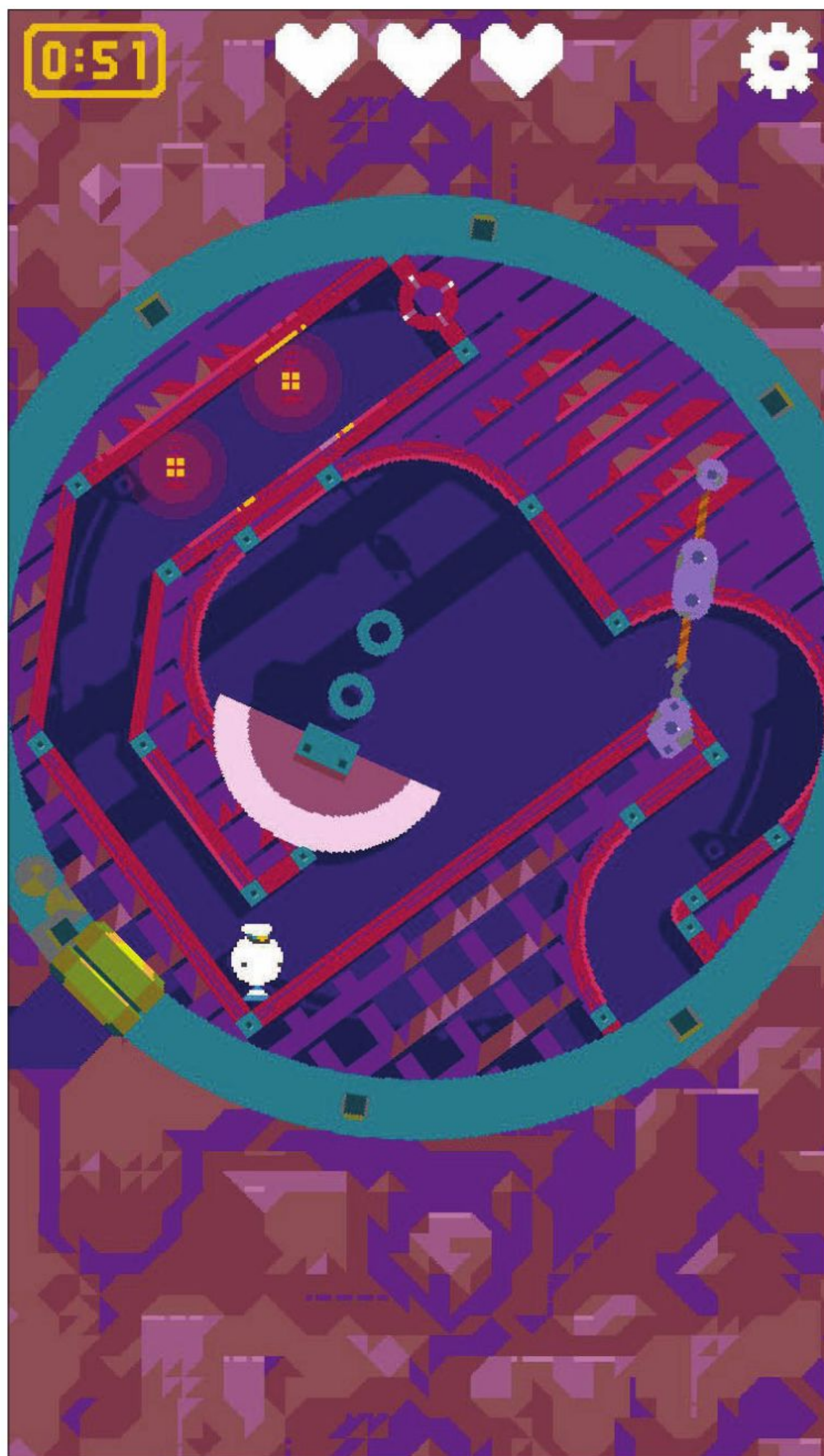
You have to swap coloured jewels within a grid, using simple finger swipes, so that three or more line up; the matched jewels will disappear and more will replace them. The tense gameplay, drip-feed of rewards and social-media integration combine to make a game that will expand to fill any time period available.



### Beneath The Lighthouse

We've never been beneath a lighthouse. We'd always assumed it'd mostly be rocks. How wrong we were. It turns out that underneath a lighthouse – or at least this particular one – you find almost certain death, in the form of spinning rooms that





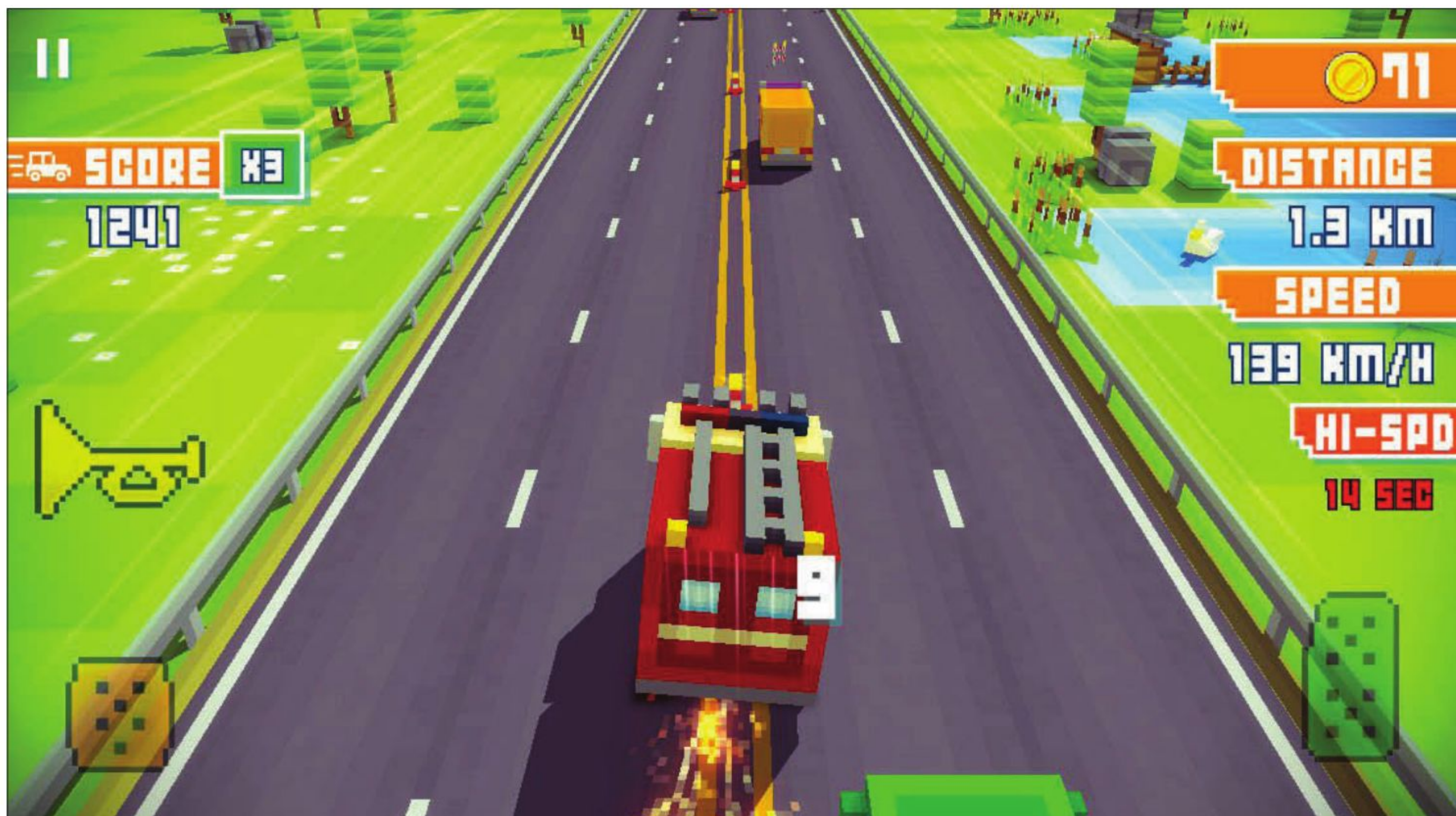
have spikes all over the place. If you're a rotund boy trying to find his lost Grandpa and get the lighthouse's light shining again, that's a problem.

What you get here, then, is an action puzzler, where through a combination of deft finger-work and a bit of brainpower you make your way safely into the depths of the lighthouse. The clever bit is the controls. You drag the on-screen wheel to shift the circular rooms, and gravity gets your little chap rolling (or, as is often the case, hurtling) about.

The other clever bit is the level design, which starts off very slightly challenging, and becomes increasingly murderous as the game goes on.

For free, you get access to everything, but there's a lives system in play. Get killed three times during any level, and an extra set for that attempt only becomes available on watching an ad. That seems eminently fair, although those lives soon vanish – especially if you want to speed run through the game like a maniac, in order to win yourself shiny rewards. **Craig Grannell**





## Blocky Highway

Ah, the open road. In this case, the open road that stretches on forever, with nary a bend in sight. Still, it's rather a busy road, with countless vehicles you must deftly avoid, because a single collision spells the end of your go. To drive the message home, even the slightest prang finds your truck hurled into the air, returning to the ground as a heap of twisted and blackened pixels. Dramatic!

There's not much originality here and the chunky visual style is overly familiar, but Blocky Highway is nonetheless compelling. You get a choice of touch or tilt controls, with the latter being a bit slippery and unwieldy, yet this oddly makes for a more exciting game. It's quite something for your chunky vehicle to zigzag along a busy freeway, avoiding collisions by a hair's breadth.

Over time, the game adds to the challenge through various means. Roadwork occasionally and



abruptly blocks your way, and train tracks cross your path; in the latter case, the game offers a novel means to avoid speeding locomotives: huge pads that bounce you into the air. Other helpers infrequently appear, too – there’s a helicopter that for a short while lifts you above the busy road, and a truck you can drive on top of that gleefully bulldozes traffic out of your way. And when your game finally comes to its smashy end, you get a chance to grab a few extra points by landing your bouncing wreck on other cars presumably driven by significantly more careful road users. **Craig Grannell**

## Breakneck

It’s not the best of days. The world is occupied by hostile invaders, intent on hunting you down. Worse, you just zoomed away in a spaceship clearly designed by an idiot. It never runs out of fuel, but has the steering capabilities of a cow on an ice rink.





And although it boasts a boost function - handy for keeping ahead of, say, ferocious aliens with massive laser cannons - it's charged by perilously having your badly steering craft 'graze' flat surfaces.

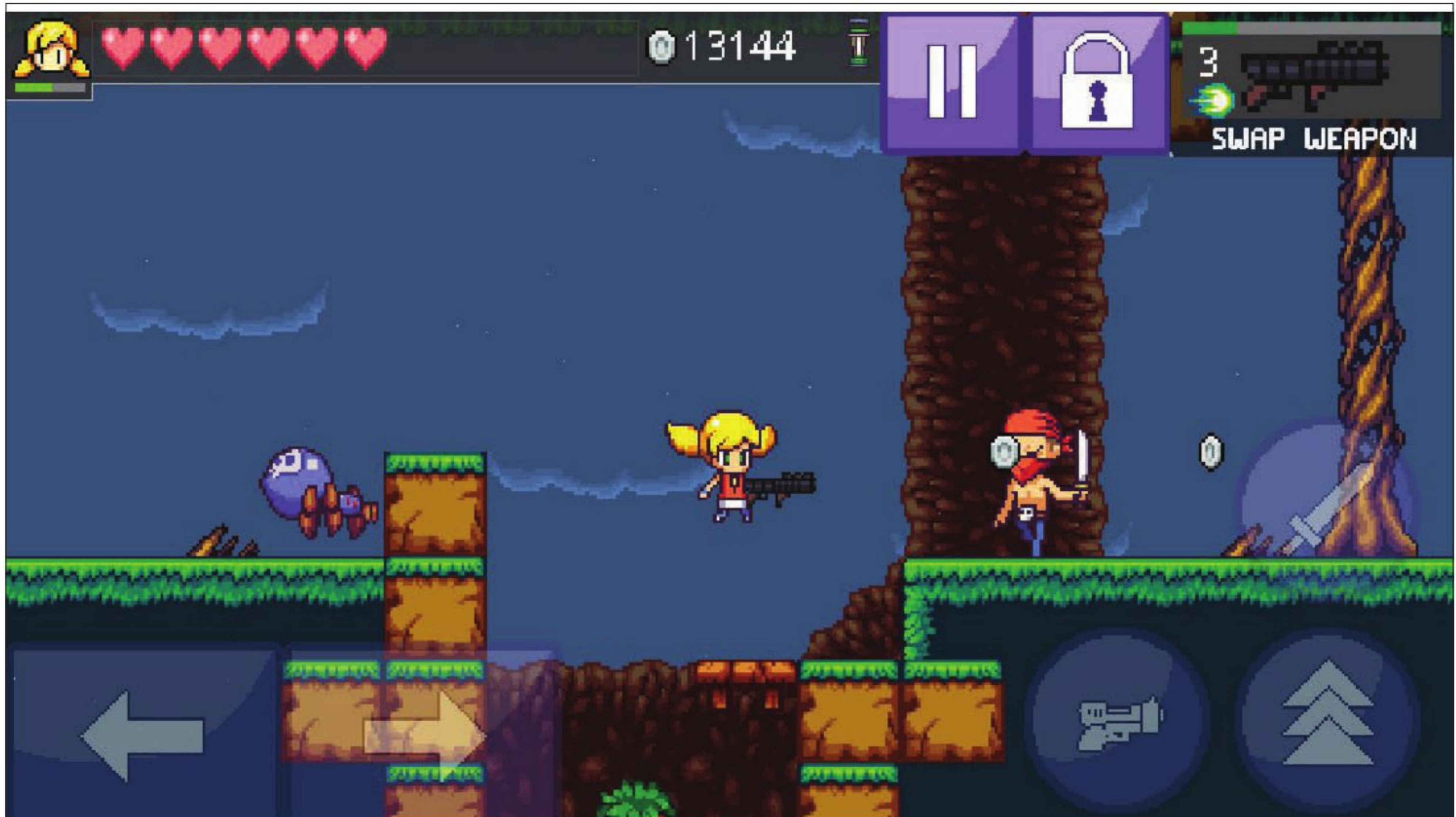
What this makes for, though, is an exhilarating video game. You blast through gorgeous 3D environments, avoiding obstacles in the desolate landscape, carefully timing boosts whenever your alien pursuer ventures a bit too near. Phantoms of your best and previous runs are displayed, so you can potentially execute a brilliant manoeuvre a second time round while simultaneously avoiding that less-brilliant move where you slammed into a massive wall.

We'd prefer Breakneck if the craft was more manoeuvrable – there's no deft weaving and zigzagging here. Instead, you drift in a manner akin to the developer's own endless horror runner, *Into the Dead*. Still, that adds strategy – the environment resets every day, and your craft's inadequacies force you to find shortcuts and quickly learn the best routes. And when you're approaching the end of a zone, boost tank empty, and your siren starts blaring about an imminent alien attack, this is one of the most exciting 3D avoid 'em ups around. **Craig Grannell**

### **Cally's Caves 3**

You'll probably be some way into Cally's Caves 3 when you start to wonder what the catch is. "Surely," you'll say, "the developers haven't given me an expansive and beautifully designed – if frequently frustrating and challenging in an old-school kind of way - platform game with oodles of blasting." At least





that's what we said, cursing our thumbs whenever we died, and wondering at what point the game would lock up and start demanding money.

As it turns out, the developers are hardcore gamers and have no truck with terrible monetisation. Therefore, you get unobtrusive ads on static screens, and are otherwise left to your own devices. And the game is excellent.

The backstory involves Cally's parents being kidnapped for a third time by an evil scientist. She therefore resolves to rescue them, primarily by leaping about the place and blowing away all manner of adversaries using the kind of high-powered weaponry not usually associated with a young girl with pig-tails. Level layouts are varied, and weapon power-ups are cleverly designed, based around how much you use each item. The one niggle is the map, which is checkpoint-based – it's a bit too easy to find yourself replaying a trio of levels



again and again to get to a place further along in your journey where you can restart.

Still, that merely forces you to take a little more care, rather than blundering about the place, and to breathe in the delicately designed pixellated landscapes. And should you decide you want to throw money at the developers, there are optional IAPs that unlock new game modes, or a load of coins if you want to splurge in the in-game store without working for your money. **Craig Grannell**

## Capitals

We do like a good word game, and Capitals is a very good word game. There are echoes here of Letterpress, in the sense that Capitals combines Risk-style land-grabbing with the need to create words from a jumble of letters. However, while Letterpress for the most part benefits players able to fashion lengthy words, Capitals is more about where the letters you choose to use are located.

The game plays out on a hexagonal grid, either with two players using the same device or





battling it out online thanks to a Game Center match-up. All letters on the board can be used to create a word, but only those attached to your territory flip to your colour on submitting a move. The important thing is to keep your capital surrounded by territory rather than letters. If you don't and your rival's move includes letters adjacent to your capital, it's captured. They then get a free turn, and since the objective of the game is total and utter annihilation, that extra move is often enough to gift victory.

For no money at all, Capitals is one of the best games around for word-game nuts, although we'll admit to being a smidgeon miffed about the ad model; in miserly fashion, it only gives up a solitary game for every advert watched. Still, since a game can often play out as a days-long tug of war, the ads are hardly a huge drain on your time for what you get in return. **Craig Grannell**

## Does Not Commute

Does Not Commute starts with a simple driving challenge: get from point A to point B before the timer runs out. (The car runs automatically: you just tap the left or right side of the screen to steer.) But as soon as you achieve this, the game rewinds time and asks you to repeat the trick, driving a second vehicle on the same course. Only this time you need to contend with another driver on the road: yourself, following whatever route you just took in the first car. This repeats until the screen is dangerously and hilariously full.

There are lots of neat touches: the funny snapshots of each commuter's life and why they're in a hurry; the reckless jumps and shortcuts that





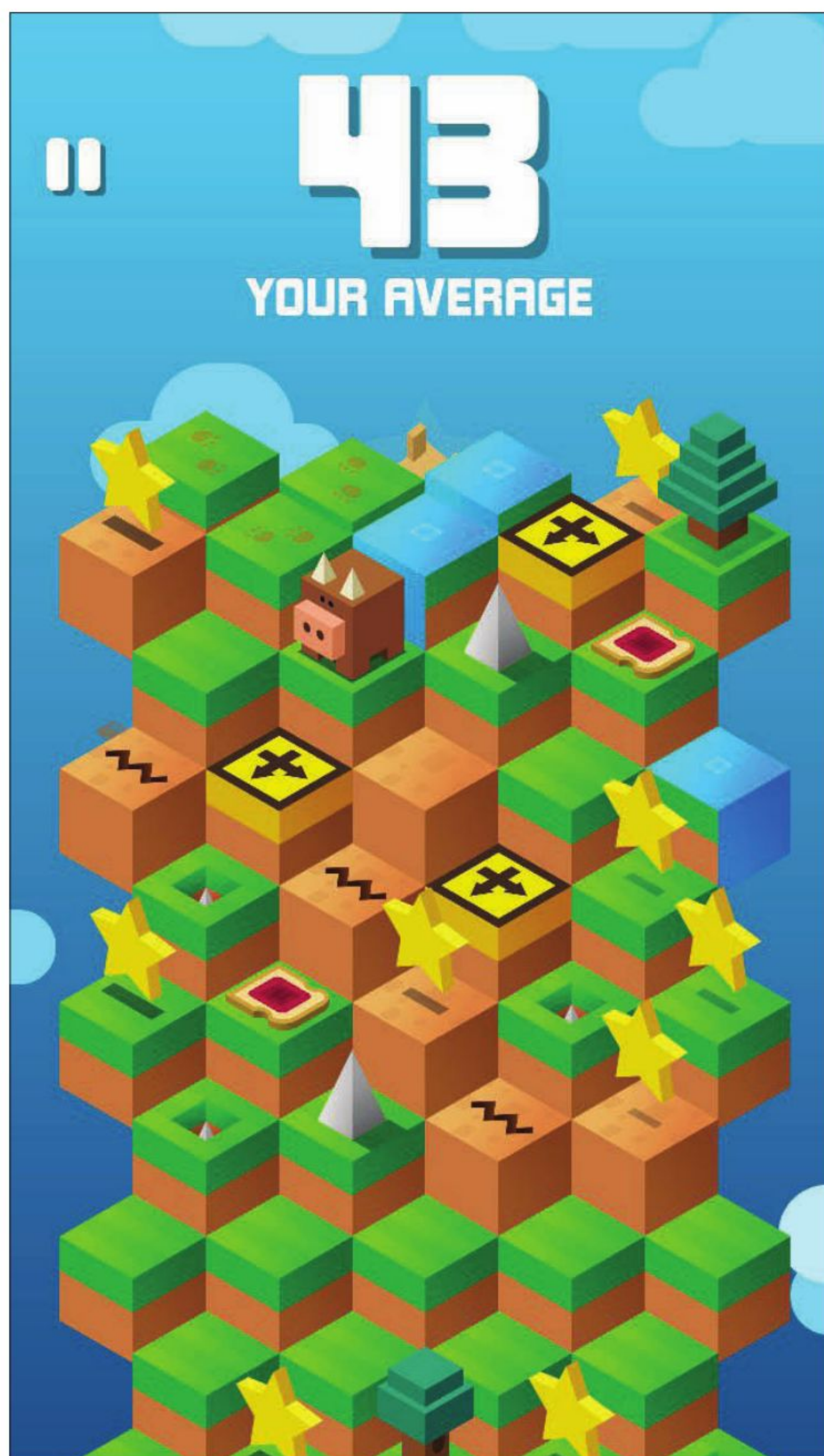
you're heavily encouraged to use in order to avoid traffic, but which nearly always end in disaster; the desperate rush to beat the clock and pick up the timer-boosting powerups; and, best of all, the challenge of adapting to a vehicle that handles completely differently to the previous one, all within a space of seconds.

This is a free game, though you can't save at any of the checkpoints until you upgrade to the Premium version, which costs £1.49. **David Price**

## Down The Mountain

You might detect a whiff of Crossy Road (above) when first laying eyes on Down The Mountain. It has similar cartoonish, cuboid, colourful characters. There's instant death when you mess up. And there's a hint of Crossy Road's collector mentality, in you gradually amassing a bunch of misfits to guide down the seemingly infinitely high hill from





hell. But there any similarity ends, because Down The Mountain is simultaneously much simpler and far trickier than Crossy Road.

It's much easier in the sense of the controls. Like Crossy Road, there's old arcade game DNA in Down The Mountain, but it's a Q\*bert field of isometric cubes, rather than endless Frogger. But whereas other characters on the mountain have free movement, you don't – you can only bound downwards, to your left or right. The tough bit is everything else. The mountain is chock full of

deadly hazards, such as bounding cars, spikes, lava blocks and ravenous beasts. Some tiles temporarily reverse the controls, while others poison you, leaving mere seconds to find an antidote.

Down The Mountain then becomes a bit overwhelming, with you having to juggle all kinds of tasks and dangers. Games are short. Yet if you persevere and get yourself into 'the zone', it becomes a thoroughly addictive experience; and even if you get frustrated, the game's charming nature always draws you back for one more go.

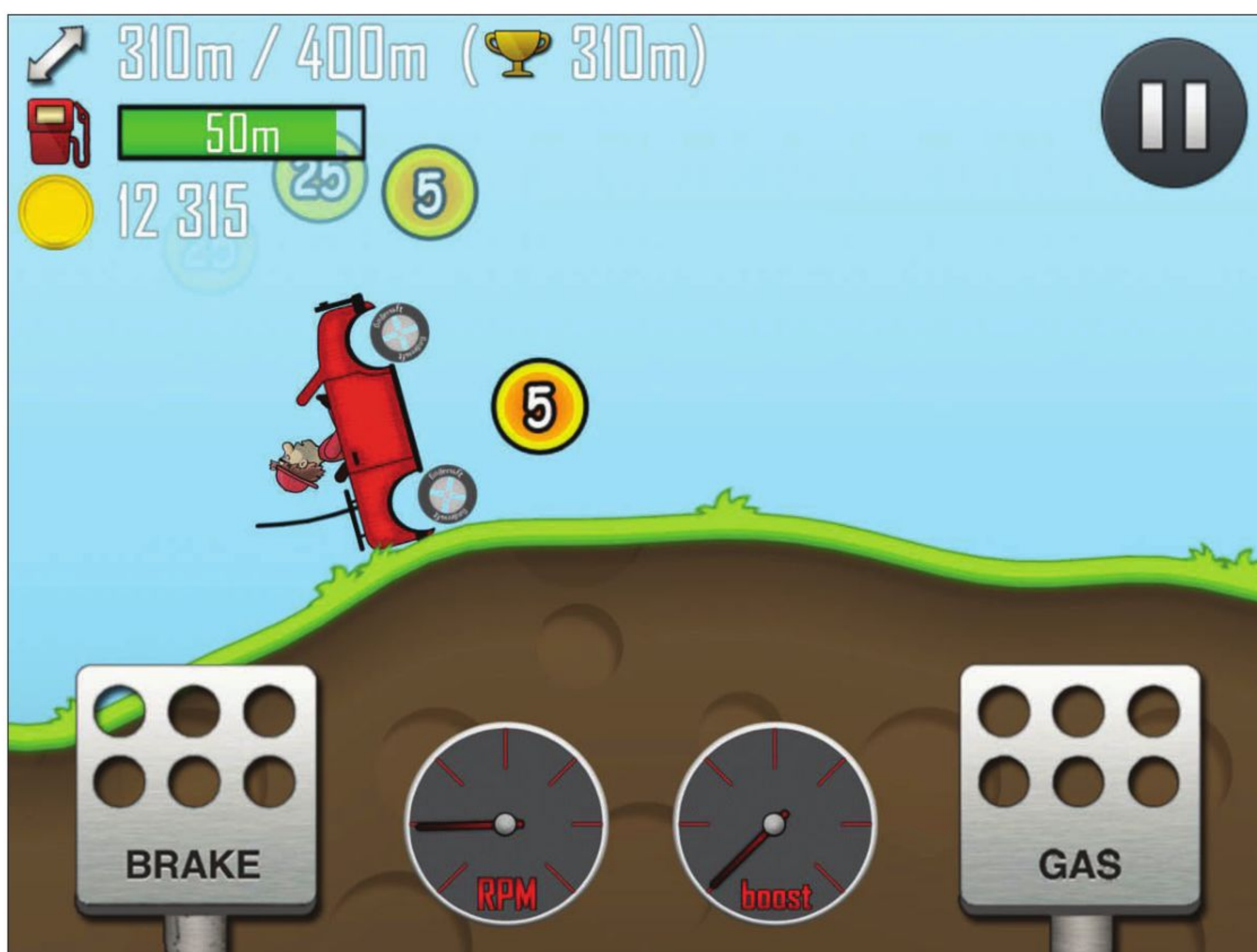


(There's IAP here, but it's all avoidable. If you'd like to reward the devs, though, 79p removes the unobtrusive ads, or gets you four keys that can be used to unlock crates that award you new characters. Keys are otherwise found on the mountain.) **Craig Grannell**

## Hill Climb Racing

Hill Climb Racing is an excellent time filler which you can pick up and put down at a moment's notice. Better still, it's an excellent free time filler.

You spend the game driving a 4x4 up hills, across bridges, down hills and then up more hills. Along the way you collect coins and fuel. Drive too slowly and you'll run out of petrol; drive too quick and you'll flip the vehicle over. There's just a brake and accelerator, but you must use these controls carefully – and mastering them is tremendously rewarding. Before long you'll be





beating the steep hills you previously thought impossible. Using coins you can upgrade your starting vehicle and unlock new ones. You'll quickly realise that to unlock most of the levels and vehicles you'll have to use the in-app purchases to buy coins rather than earning them, but it's perfectly possible to play Hill Climb Racing without spending any money at all. **Jim Martin**

### Jetpack Joyride

In this delightful cave flyer, your disgruntled lab-assistant character steals a machine-gun-powered jetpack (don't ask) and takes flight through the lab's never-ending string of long, tunnel-like rooms. As you jet or run along, you need to avoid electrified barriers, lasers and missiles while collecting coins. The mix of responsiveness and acceleration is just about perfect, the comical graphics raise it above most offerings in the genre, and the extras –





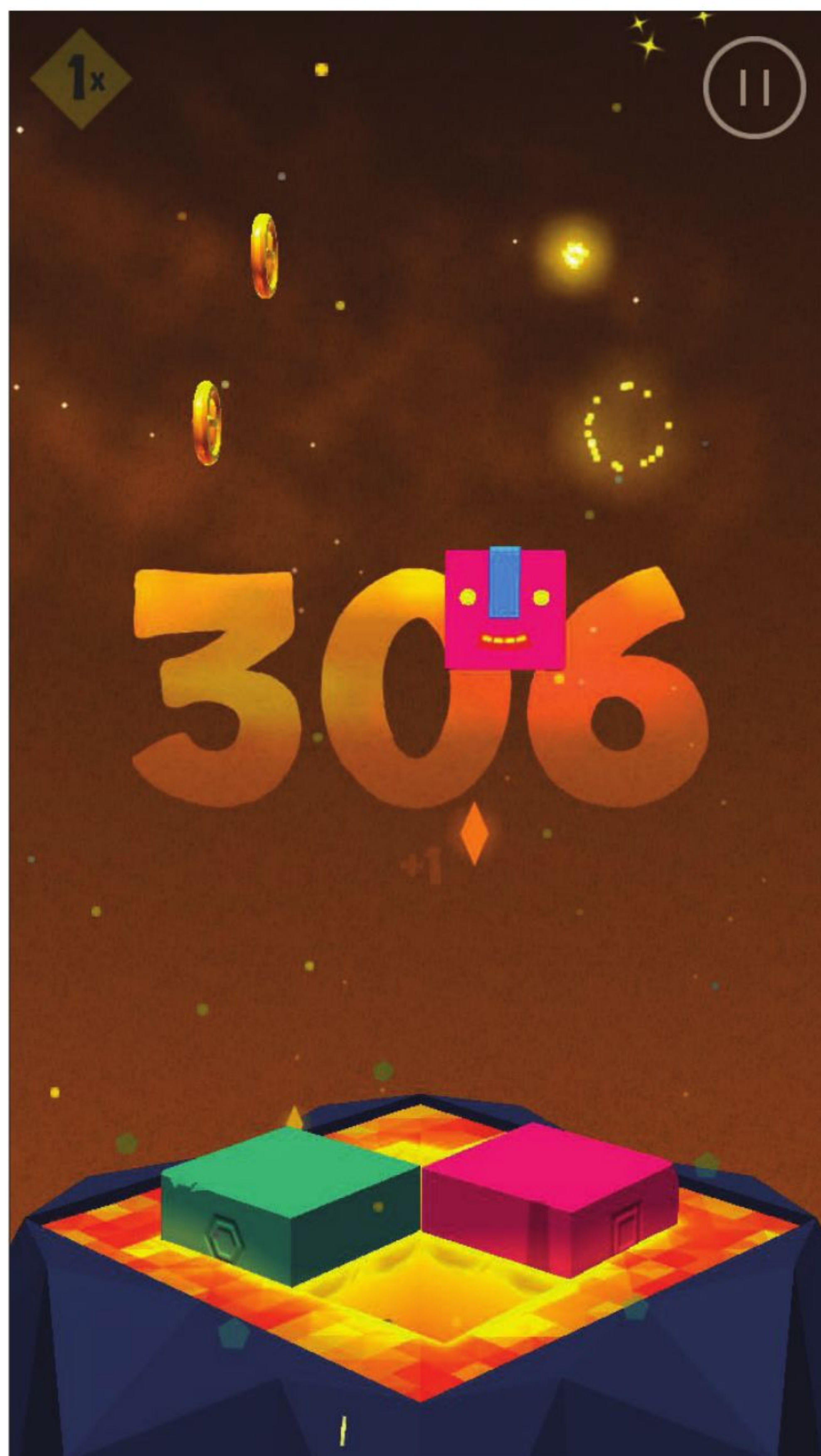
including a superb array of vehicles – make Jetpack Joyride a true standout. **Dan Frakes**

## KANO

We've played KANO a bunch of times and still have absolutely no idea what's going on. We know what we have to do, but this is otherwise a game of strangeness.

The gameplay, then, involves colour-matching. You control a platform at the foot of the screen, which has four coloured tiles. It can be spun with a finger, and stops with a prod, in a pleasingly tactile manner. The aim is to match the colour of a bouncing and endlessly transforming gurning 3D being when it lands.

At first, KANO is mind-numbingly easy, but that doesn't last long. Within a minute or so, the bouncing increases to manic pace, and you'll eventually miss a match. At that point, the tile disappears, leaving a hole into a lava pit; you'll then meet a furious fireball, which when it appears must be steered into the lava rather than allowing it to collide with





any remaining coloured tiles. Now and again, there's a little bonus section, where you grab coins in space, boosting your points tally.

The game continues until you've only one tile left, at which point you're awarded with a score and get to have a bit of a breather. Rather amusingly, the sole IAP (£2.29 for 'premium') adds a 'turbo mode' at double speed. Frankly, we're not sure we'd be able to cope. **Craig Grannell**

## Letterpress

In this alarmingly addictive puzzle game, you and your opponent take turns to use the letters in a five-by-five grid to build a word, thereby causing the tiles you use to change into your colour. At game end, whichever player has turned more tiles to his or her colour emerges the victor. Serious fun for word game fans. **Lex Friedman**

## Los Aliens

The little critters in Los Aliens know how to make things hard for themselves. They're very much into exploring new worlds, but also create rigid rules about how to do so. For some reason, they can only move about like knights on a chessboard, working their way around grid sectors by way of L-shaped leaps. As they go, they dump fuel required to power their spaceship. Should a complete line be built vertically or horizontally across the current zone, the ship blasts forwards;

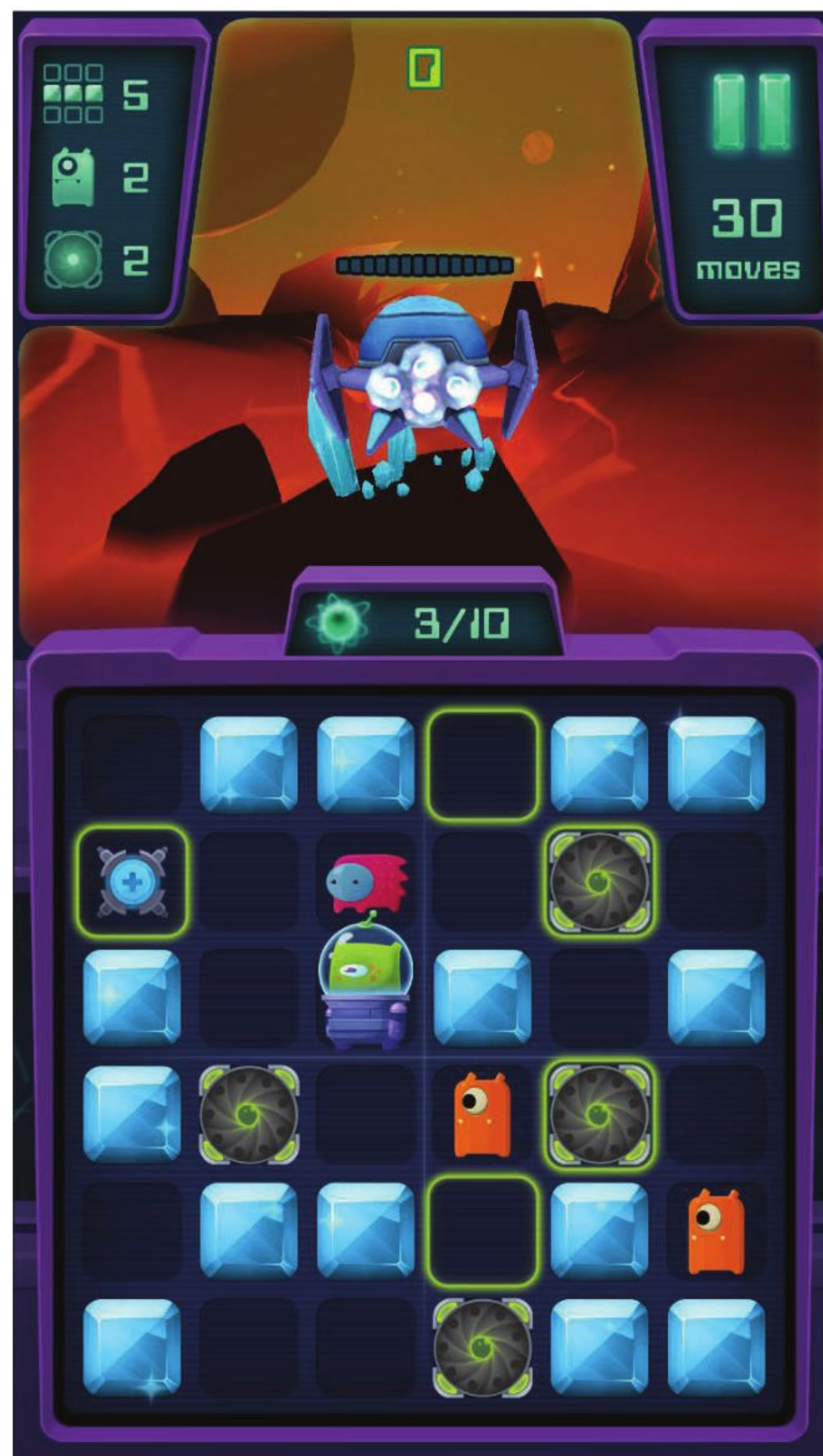




do this enough times, and it heads into orbit, ready to zoom to a new planet.

As you work your way through the game, it merrily lobs new curveballs in your direction: limited moves or limited time; the requirement to collect native species; teleporters; and more. The visuals are vibrant, and the game's mechanics feel quite fresh, even if this is fairly standard puzzle fare. There are ads and timers lurking, as you might imagine. But if you play a little every day, the former won't irk, and the ads can be blasted into space by way of a single £1.49 if they begin to grate.

**Craig Grannell**

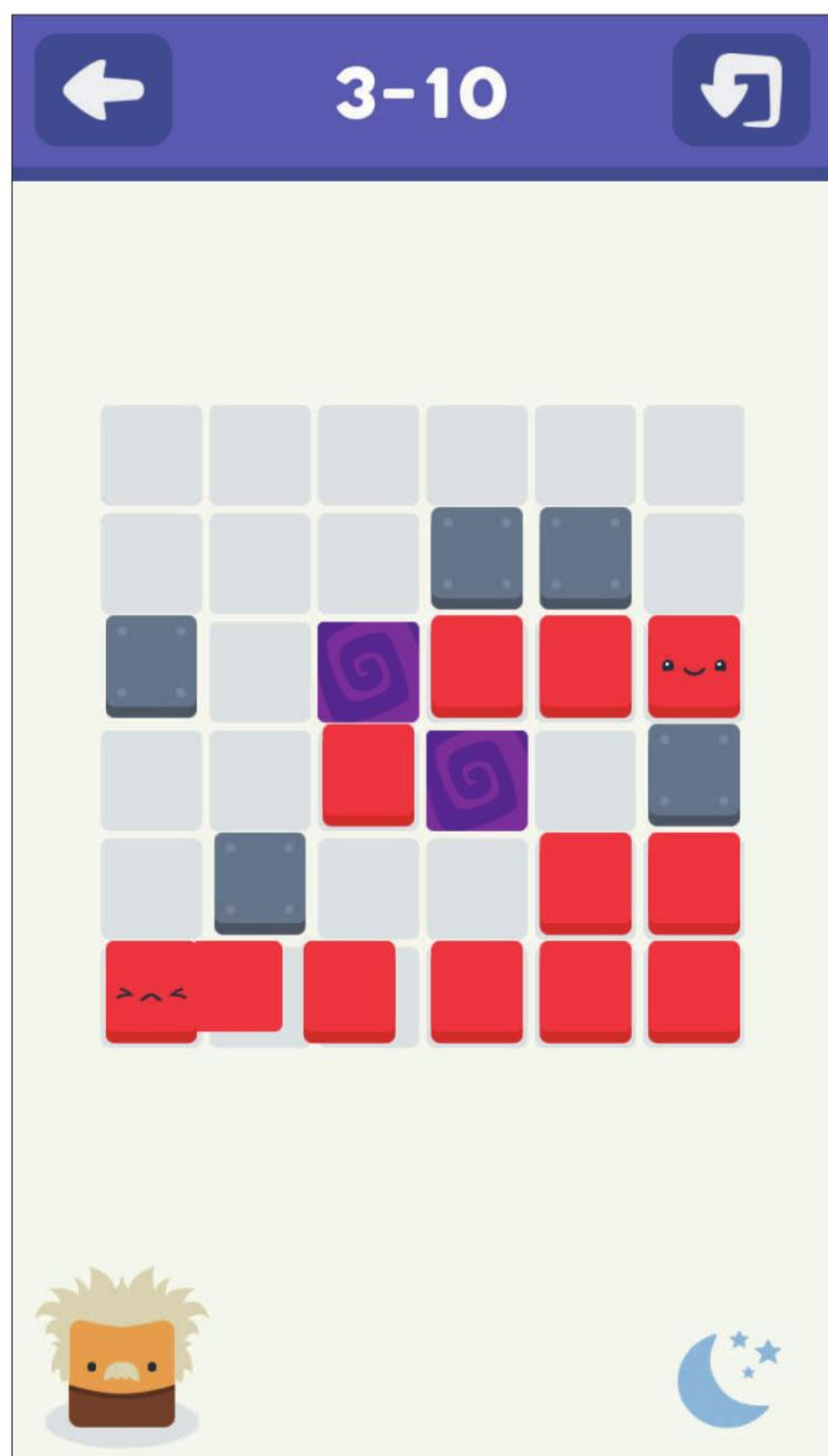


## Mr. Square

It's very easy on firing up a puzzle game to be dismissive, noting that you've seen it all before. You might think that on downloading Mr. Square, but what this game lacks in originality, it makes up for with dozens of enjoyable puzzles, and a tendency to never outstay its welcome.

The idea is to 'paint' every tile on the floor. The snag is that Mr. Square is seemingly on ice, and will slide until reaching a barrier of some sort. Furthermore, any painted tiles transform into walls





that cannot be crossed a second time. You must therefore plan ahead, figuring out a path that won't leave you stranded, with one pesky unpainted tile taunting you from across the screen.

Two smart ideas propel this basic concept onwards. First, the game's divided into chapters, each of which throws something new into the mix - teleporters; one-way routes; a clone that copies your every move. Secondly, you can make and share levels of your own, or try those that other people have made. Most surprisingly, this is all offered entirely for free.

Although you can buy coins to unlock chapters early, there's really no need, because 150 are generously given out on completing a level; and if tempted, you can get 100 more at any point by watching a video ad. **Craig Grannell**

## New Star Soccer

It's a testament to the brilliant gameplay that even football haters will get something out of this.

You're a striker starting out in non-league football and aiming for the big time. On the pitch, you're tasked with setting up and scoring wonder goals. But the game also deals with non-match activities:



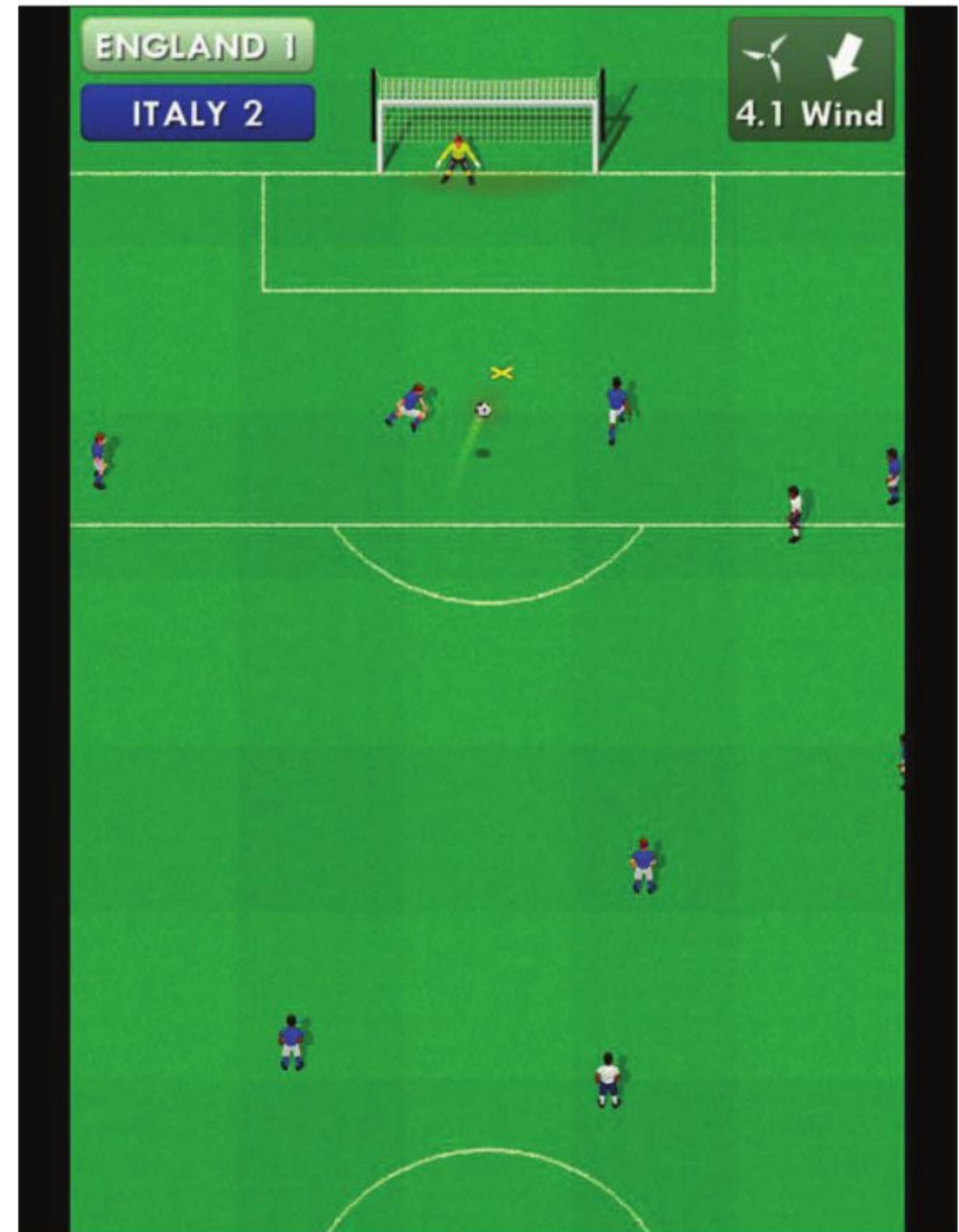
training, selecting clothes and kitting out your house in a load of tat. **Alan Martin**

## Nono Islands

With its 3D viewpoint and tap-based controls for hopping about, Nono Games initially feels a bit like Crossy Road got mashed into Temple Run with a fork. But you soon realise that this jungle expedition is something else entirely, and it has more in common with old-school platform games that demanded you to memorise a course and zoom through it as fast as possible.

Each of the shortish levels has you navigating a small patch of wilderness on a 'clockwork' island, along narrow paths surrounded by death. You tap to move forward one step, swipe left or right to move forwards and in the relevant direction, and swipe back to move backwards. You must take care to avoid getting eaten by a leaping shark, poisoned by a scuttling spider, or falling into the fetid swamp water. Timing is key.

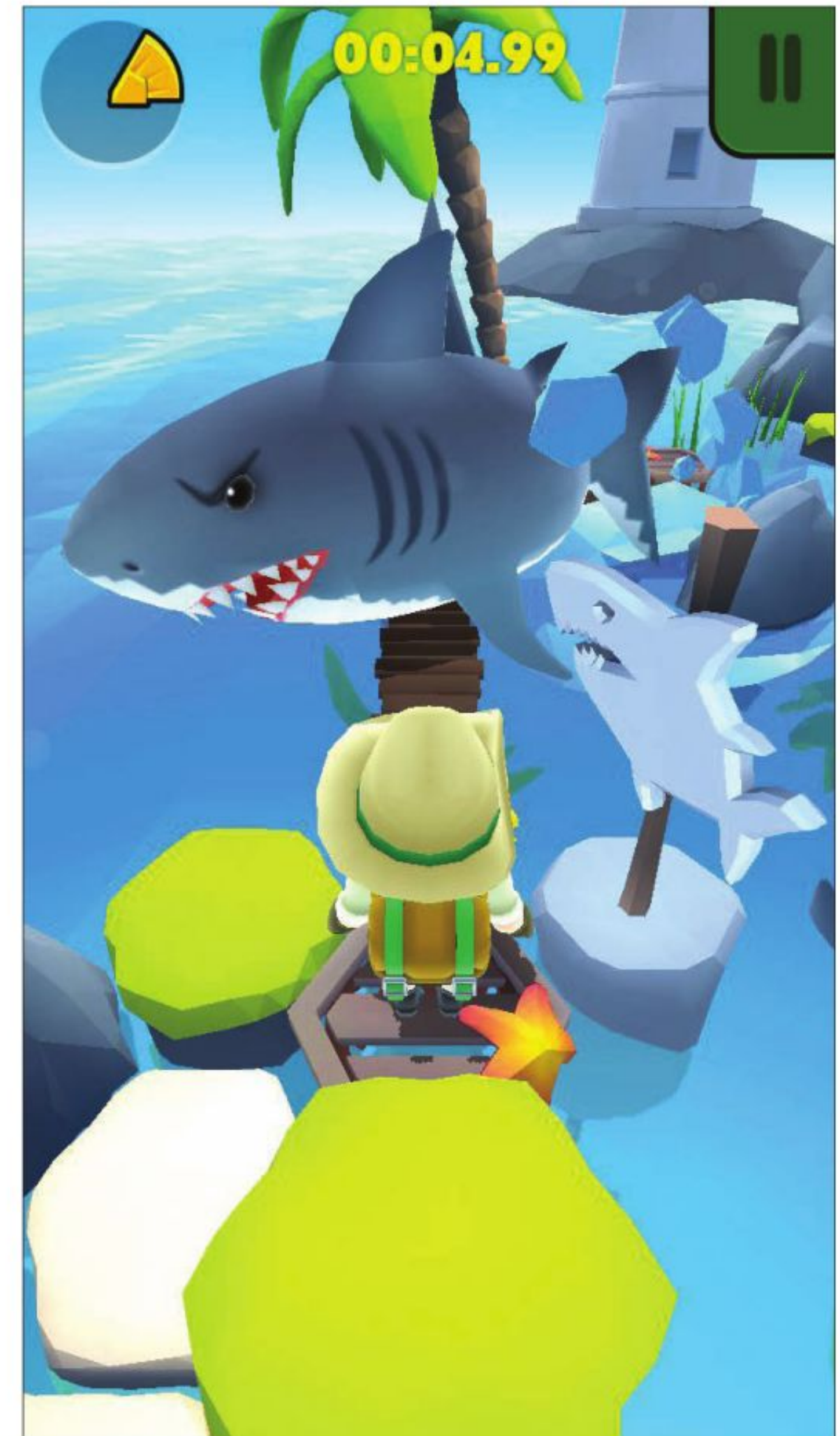
What's especially smart about Nono Islands, though, is how it can be approached in various ways. If you like, it's possible to carefully pick your way through each level – and doing so is relatively simple. But really it's all about time-attack scores, especially if your friends are playing. You'll want to get to the end of each stage as rapidly





as possible, and that means implementing a precise series of taps and swipes to shave fractions of a second off of your time.

For free, you rather generously get access to everything. You can also buy five checkpoint tokens for 79p or unlock all checkpoints for £2.29. Checkpoints mean you don't have to replay previous levels should you fail, although tokens can also be found within the game itself, and Nono Islands gives you one free attempt, and another after a few more minutes. **Craig Grannell**



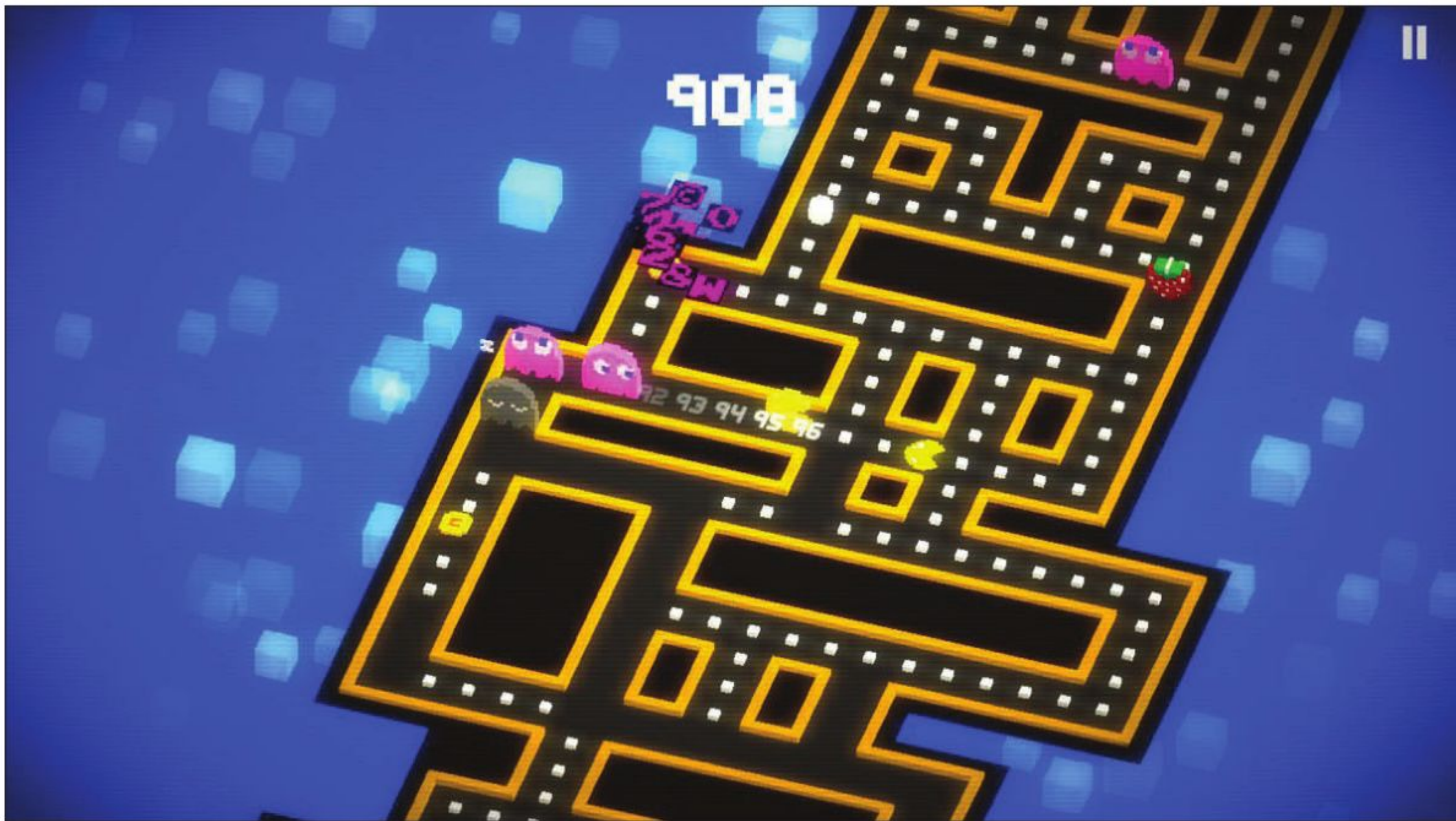
## Pac-Man 256

The original Pac-Man was a bit broken. If you had magic thumbs and could somehow reach the 256th level, you'd be confronted by a massive glitch. The right-hand side of the screen became all messed up, with no way through. Until now, that is. In Pac-Man 256, you get to venture beyond the glitch.

What's there, it turns out, is a kind of endless hell for the yellow dot-muncher. Pac-Man gets to traverse a never-ending maze full of spooks, eating pills until he finally comes a cropper. He can't linger for long, either, because the all-consuming glitch is always in hot pursuit.

Fortunately, Pac-Man has ways of fighting back. Power pellets from the original game are present and correct. Eat one and the ghosts turn blue, enabling you to gobble them down for extra points. New power-ups are also dotted about, and these

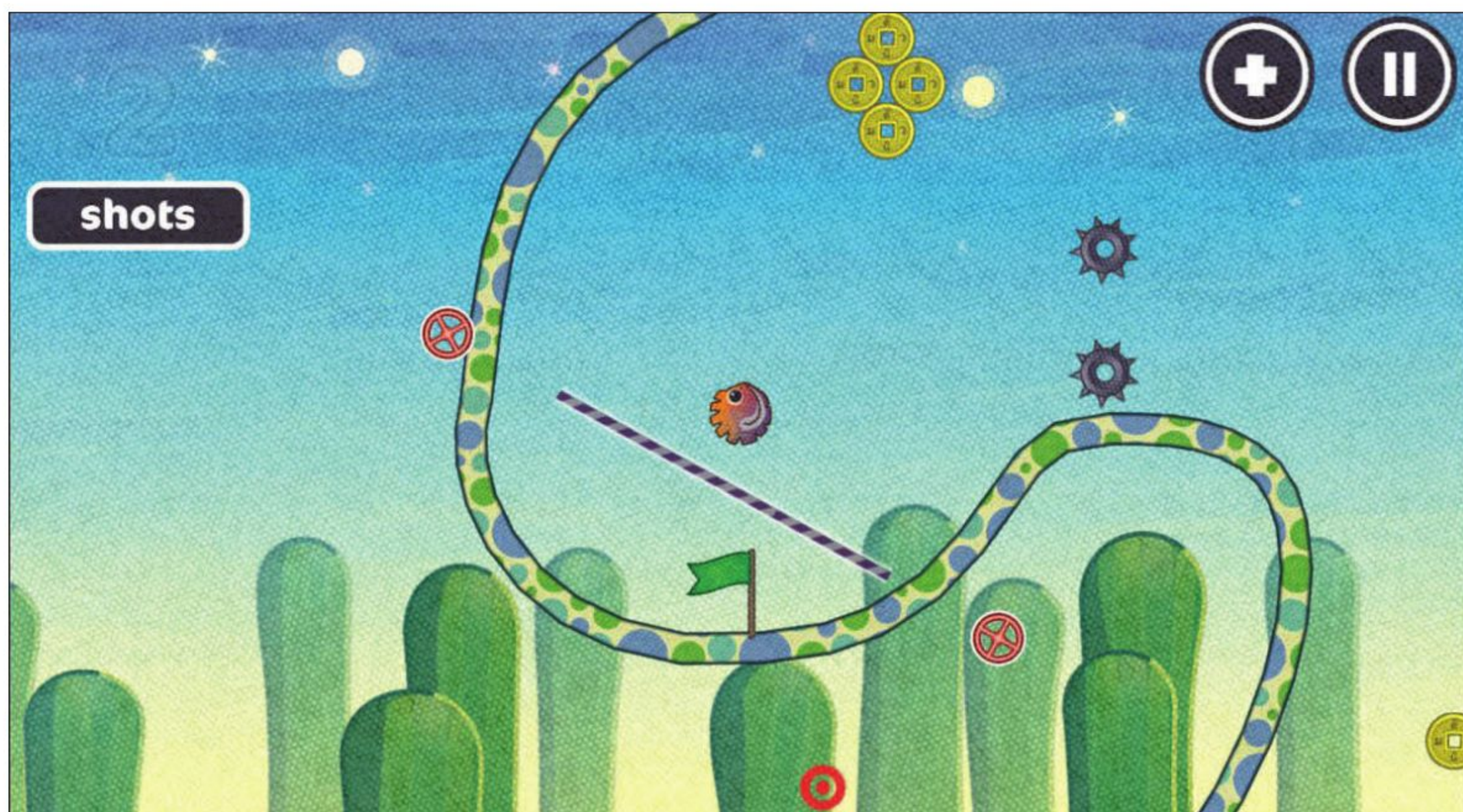




become more powerful the more you play the game. If you ever thought, during the original Pac-Man, that it would be a better game if the rotund hero could spew laser death from his maw, then you'll be a happy camper here. **Craig Grannell**

## Pangolin

A physics-based puzzler in which you bounce a cute little creature around a level and try to get him to the goal with as few shots as possible. Sort of like crazy





golf played in mid-air with a scaly animal instead of a ball. We like this a lot, and the basic game is free. It's probably worth shelling out for the extra levels, though. **David Price**

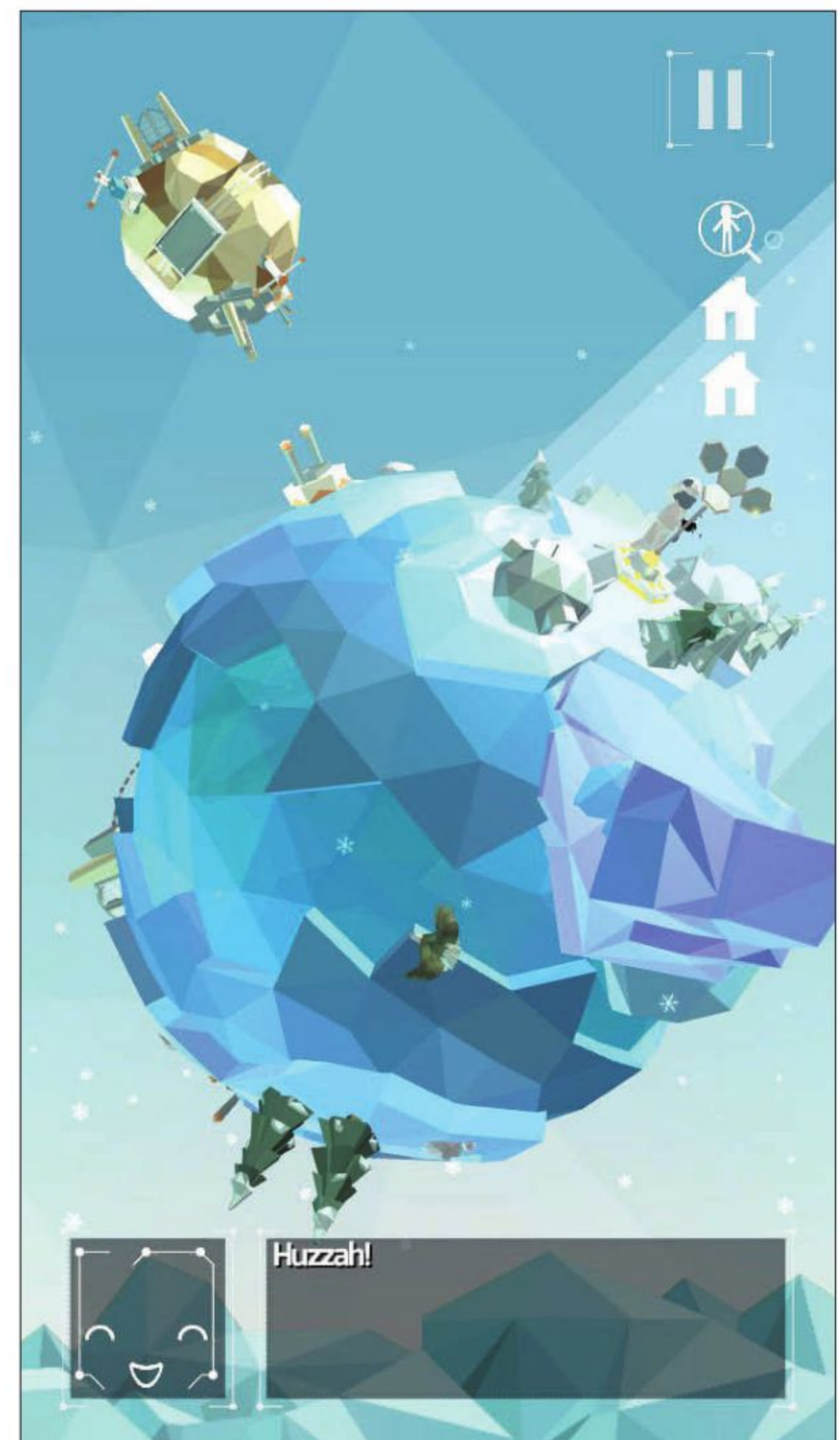
## The Path To Luma

It's not hard to spot the underlying message here, what with this game being sponsored by a US energy company big on selling green energy: clean energy is a very good thing. In fact, in Path to Luma, clean energy is so good that it's capable of bringing back to life seemingly dead, abandoned planetoids.

Planetoid-saving isn't quite as simple as flicking a switch, though. You must direct SAM – a Sustainability Augmentation Model – about the place, finding and repositioning solar batteries, utilising wind power and so on, manipulating the very planet with your fingertips.

There's quite a lot of hand-holding, and we can't imagine it'll take that long for most players to blaze through the 20 levels on offer. It's also a title that doesn't at any point meet its haughty description of being "a memorable story of heroism and the revitalisation of a civilisation".

What it is, though, is a really fab little puzzle game with a lovely soundtrack and some great visuals. We admit to going





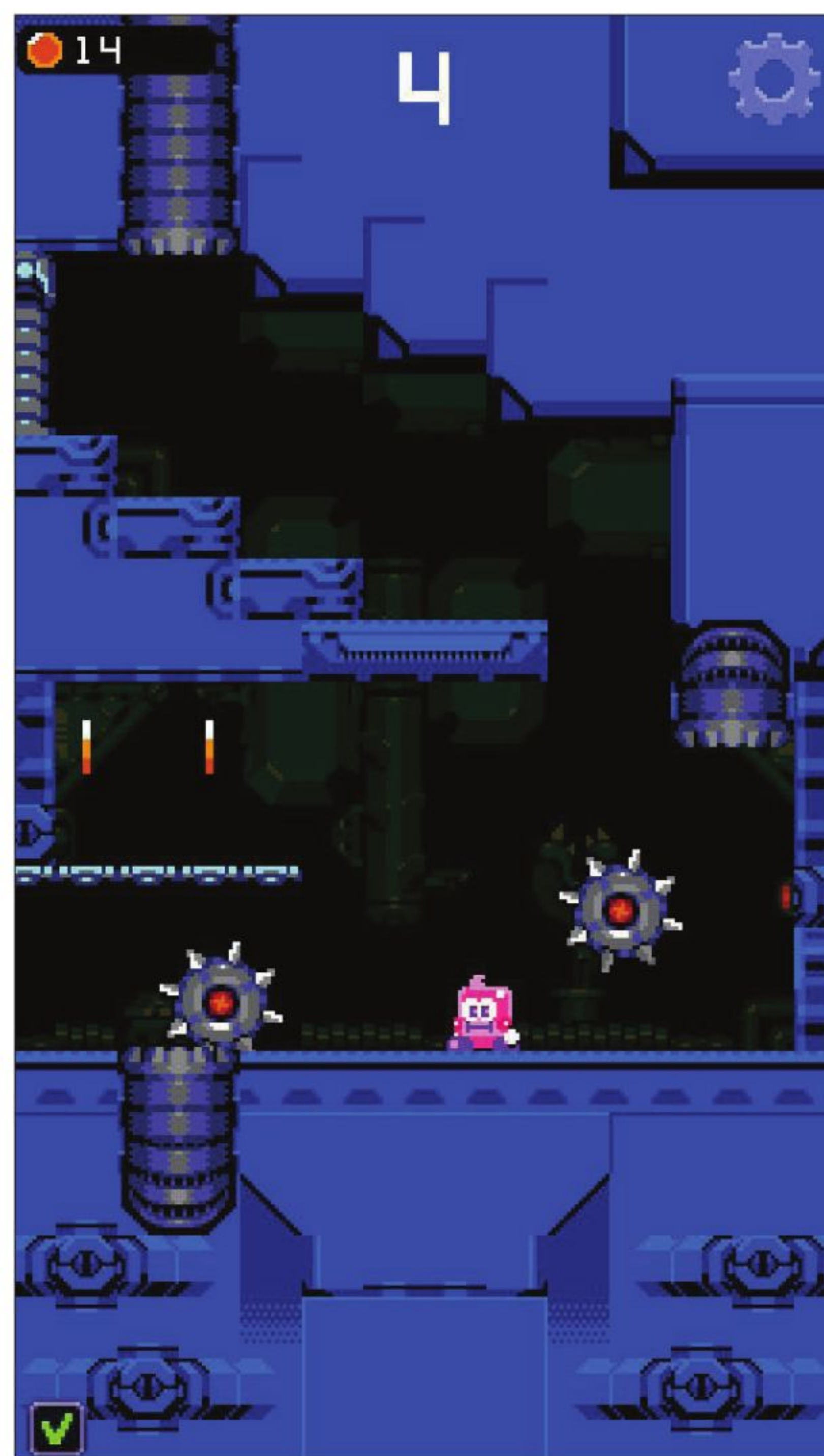
“ooh” the first time sun beams exploded down to clean up one of the game’s tiny worlds. And perhaps we are now thinking a bit more about installing solar. Still, that’s got to be better than a game trying very hard to get you to gorge yourself on chocolate.

**Craig Grannell**

## Platform Panic

Platform Panic certainly has a lot of platforms in it, but you’ll be doing the panicking. The premise is something something heroes abducted something, which ultimately results in you taking on some kind of quest that involves inevitable death after valiantly navigating your way through a number of dangerous rooms. Movement is swipe-based – your little hero auto-runs and you swipe left or right to head that way or up to jump. For the most part, timing is crucial, because if you collide with a single hazard, game over.

What makes Platform Panic a cut above, though, is the huge number of rooms and hazards, their smart design, and how they’re fired your way. Each room on your journey acts as a miniature puzzle to be bested and committed to memory. On encountering something new – pipes that suck you in and blow you out elsewhere; hero-frying lasers; huge spiked wheels – you’ll likely be horribly killed. But the next time you face the





room, you'll be ready for it and add a point to your tally - well, unless it's flipped the other way round, in which case you'll probably die again.

With rooms being presented broadly randomly, Platform Panic is endlessly replayable. It's also mobile-friendly, given that games are typically over inside a minute or so (unless you're a platform-game genius, in which case two minutes).

IAPs are lurking, but they're of the non-hateful variety. £1.49 nukes the ads, and you can also buy coins, which can be spent on continues or characters. Three quid nets you 5,000, which is enough to buy every single character and still have change for a handful of continues. Alternatively, you can collect coins as you play, since each room has at least one. **Craig Grannell**

## Run Sackboy! Run!

Run, Sackboy! Run! (free) is a mobile spin-off from the Sony game LittleBigPlanet, a four-player side-scrolling affair that builds upon the approachable Super Mario run-and-jump formula while also allowing players to build their own levels. It's certainly streamlined by comparison: it's a strictly single-player affair, lacks in-depth character customisation and level creation, and does away with manual player movement. In other words, it's an endless runner on a platform that has loads of them.

But Run, Sackboy! Run! has an ace in the hole: being ridiculously charming. Even a simplified, free-to-play take on the LBP series can bring wide smiles to your face as you leap across colourful chasms, collect bubbles and avoid the goofy-looking monster on your tail.





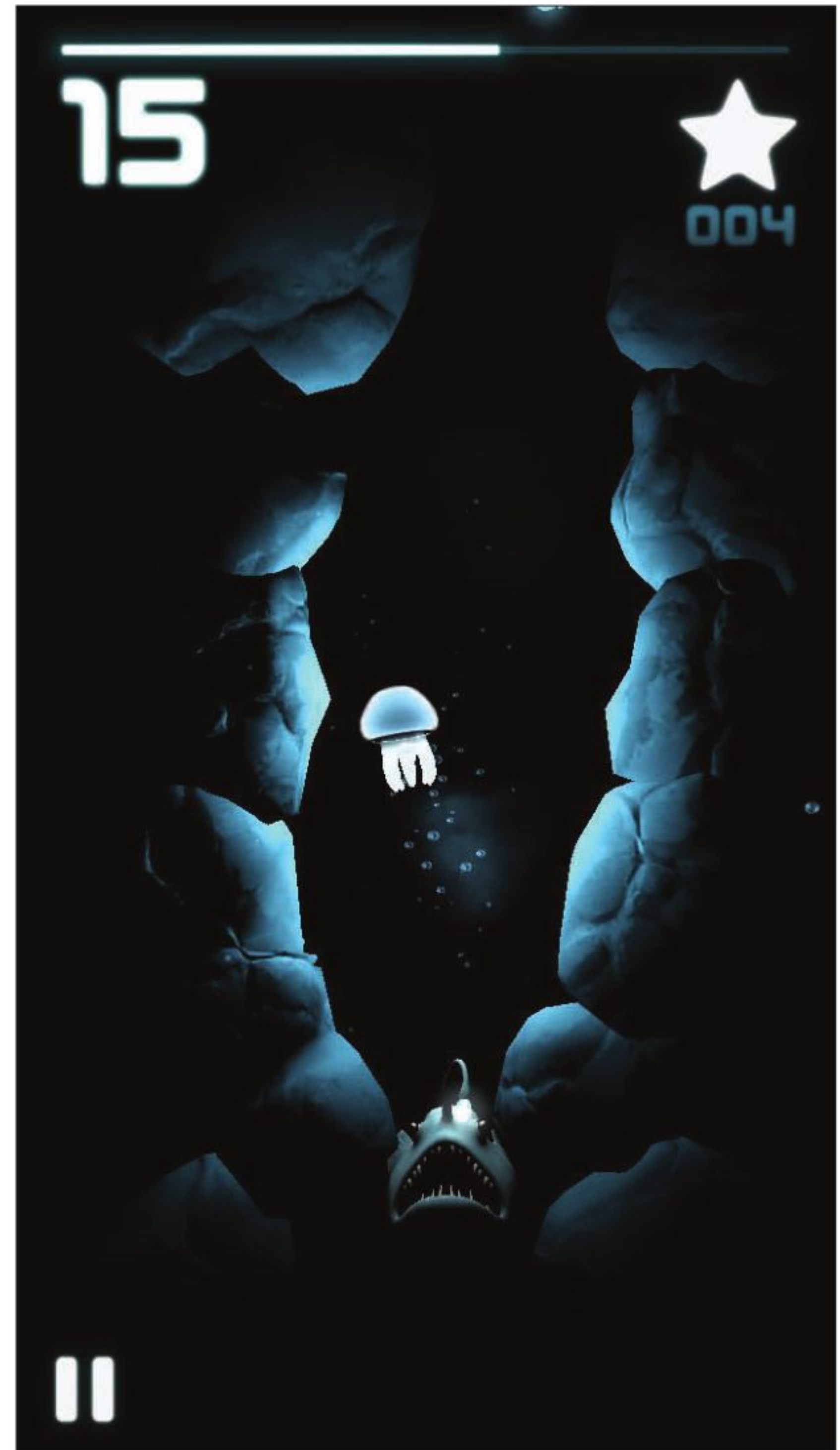
And despite the silly tone, it actually proves to be pretty challenging. You can jump and dash forward via taps and swipes, respectively, and you'll need to use both at times to overcome long stretches of spikes, or to recover when you're about to hit an enemy. As the speed picks up, it becomes harder to anticipate obstacles ahead, which amps up the difficulty level. And it's free, of course. And and so long as you're cool with probably never unlocking some of the pricier costumes – which cost an extravagant amount of in-game currency – there's plenty of entertainment to be had here without spending a penny. **Andrew Hayward**

## Seashine

There's a disconnect between the aesthetics of Seashine and its gameplay - and this initially makes for a rather strange experience. The game takes place in the inky depths of an unnamed ocean. Your tiny luminescent jellyfish has a glow that offers the only light to penetrate its surroundings. But the light is fragile and in constant danger of being



extinguished. Every flick you make propels the gelatinous protagonist in the relevant direction. But as soon as you're beyond the cosy starting point, a life bar rapidly depletes. The jellyfish must seek out plants or creatures to eat, which keep the lights on for a few extra precious seconds, thereby enabling further searching. There's naturally a food chain in operation, though, and so you're both predator and prey; you're never far into your journey before being pursued by a fish with a mouth full of extremely nasty-looking razor-sharp teeth.



Games therefore tend to be fraught, stressful experiences, at odds with the tranquil underwater burblings, tinkly soundtrack and gorgeous visuals. But there's a palpable sense of excitement when you manage to escape through a tiny tunnel a fish cannot squeeze through, or grab a morsel to eke out a few extra seconds of life.

Seashine does enable you to cheat death through the use of life-extending stars; unsurprisingly, these can be bought using IAPs. We're unconvinced about this part of the game, though – it feels like cheating, and quickfire visits to the abyss work more nicely on mobile. We might have been convinced to part with cash for a noodly endless 'zen' mode, however. **Craig Grannell**



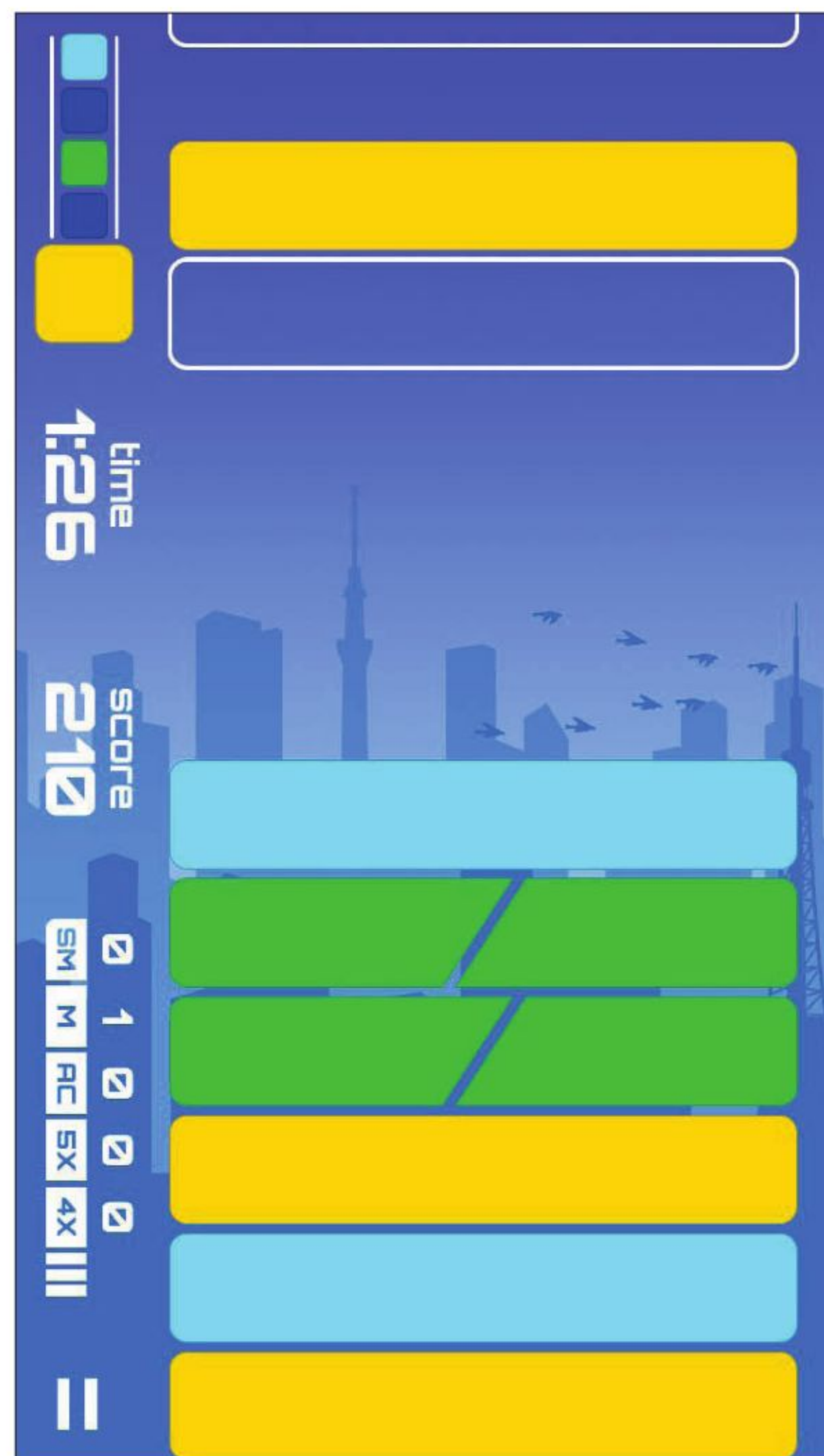
## Shibuya Grandmaster

Shibuya Grandmaster feels a bit like someone thought Tetris was a bit too complicated and then smashed the resulting stripped-down well puzzler into a match-three game. Consequently, you're tasked with managing slabs of colour as they float down from the top of the screen, and placing them into a very limited number of boxes.

The aim is at the very least to create matches. If two matching slabs are touching, they'll acquire a diagonal line and a tap removes them from the well, leaving more space. But doing this and no more results in a rubbish score – Shibuya Grandmaster wants you to have a strategy and take risks.

Over time, then, you must figure out how to rack up bonus points by managing blocks so you can create larger towers of the same colour, or remove a bunch of combos at once. It's a smart juggling act made all the more devious through the game's rank-based reward system. If you want to progress, you'll need to practise and you'll fail often; but Shibuya Grandmaster is oh so satisfying once it clicks.

In fact, we'd argue the original Shibuya (from way back in 2010) was a cruelly overlooked App Store classic, and so we're delighted to see this follow-up, in all its beautiful high-res glory. From an IAP standpoint, it's almost absurdly generous: you can





play as much as you like, forever; but if you want to support its developer, buy a new background (79p each) or ‘everything forever’ (£3.99). **Craig Grannell**

## Skiing Yeti Mountain

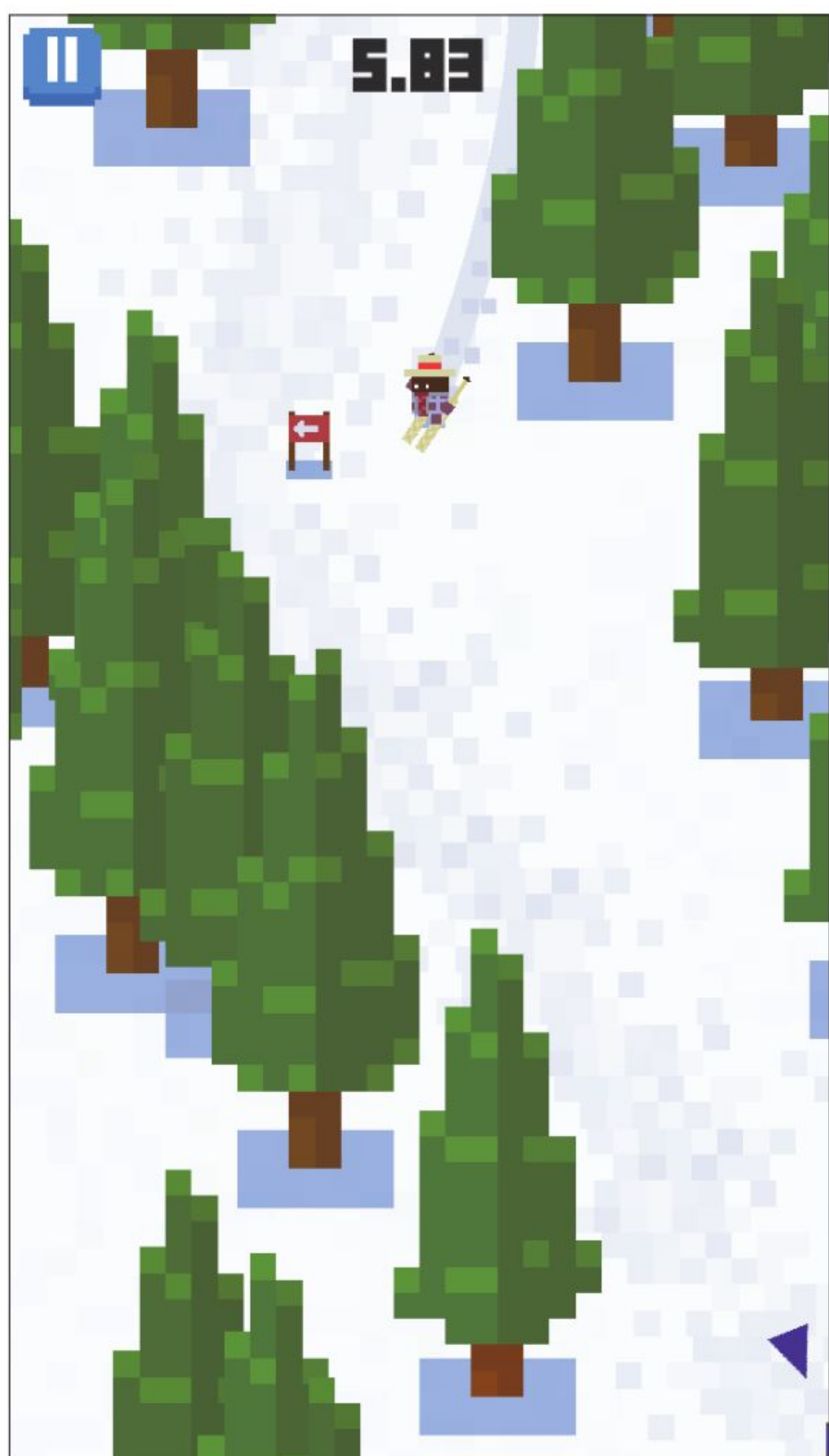
Slalom games are as old as the hills – snowy or otherwise. They existed on the earliest home computer systems, and so Skiing Yeti Mountain is hardly a rolling snowball of innovation. Nonetheless, through some great design and humour, developer Featherweight Games has managed to craft an essential mobile freebie.

The basics of the game are much as you’d expect: zigzag your way down wintry slopes, passing on the correct side of gates (left of red and right of blue), and try very hard not to embed

yourself in a tree. The controls only require a single finger, which you move horizontally to adjust how far to weave. Initial ham-fisted attempts at progress gradually give way to elegant swooshing about, along with heart-in-stomach moments as you zoom, inch-perfect, between a couple of trees.

Throughout, a cast of misfits adds some personality to proceedings, telling tall tales, getting surprise-eaten by Yetis, and in one case providing the only example on iOS of an in-app ad sting we’ve ever laughed at.

**Craig Grannell**





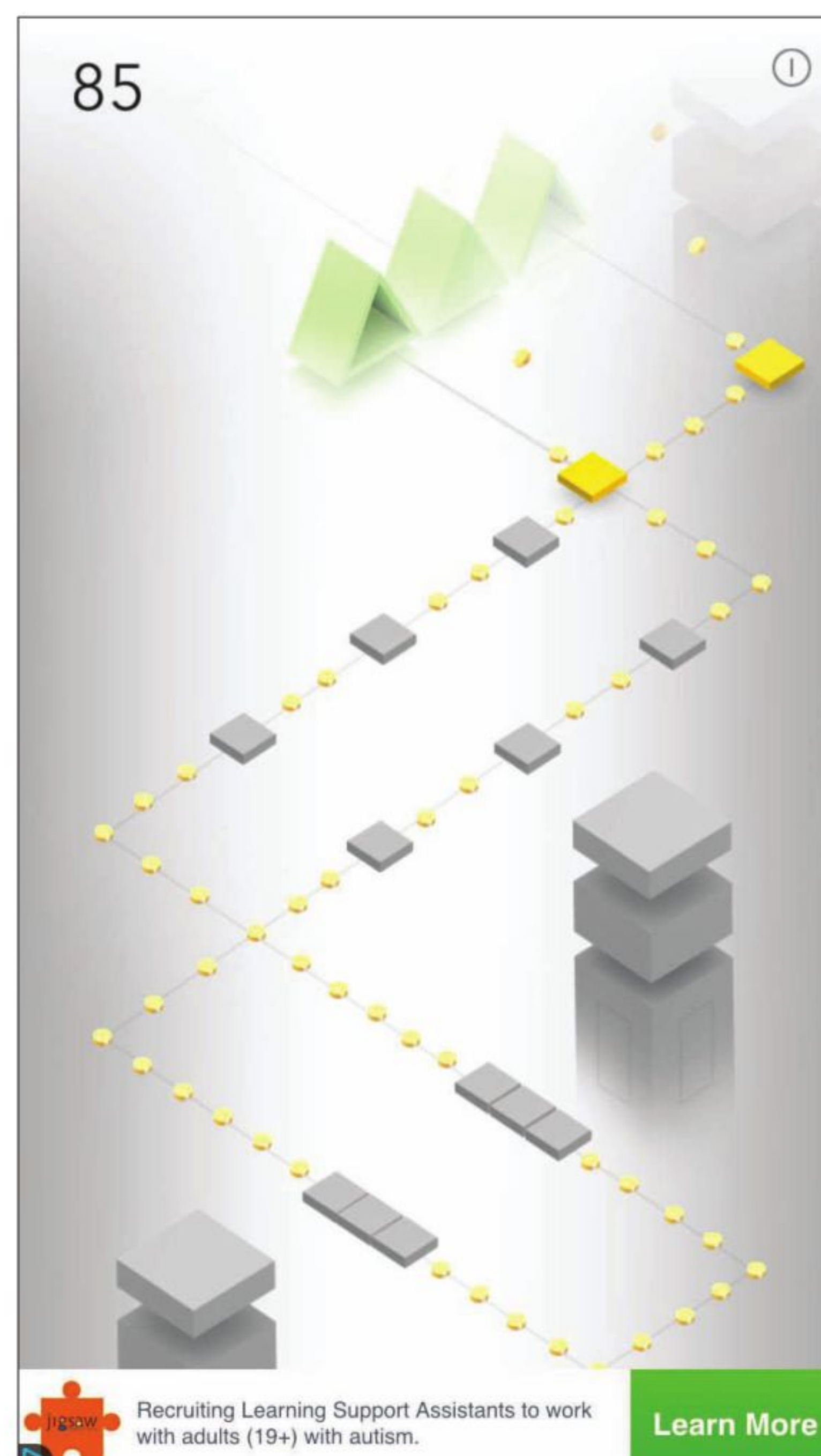
## Sky

Typically on seeing the name Ketchapp, you know what you're in for: simplistic endless fare that's like a cheap snack - briefly satisfying but ultimately throwaway. Sky is different. The basic premise is nothing new, but everything's put together so well that it becomes surprisingly compelling.

In Sky's minimal isometric world, a yellow square moves along a zigzag track, gobbling dots. In its way: grey squares that must be avoided. A tap sends the yellow square into the air. A second tap while airborne results in a double-jump, for avoiding larger sets of grey squares.

Where things become interesting is on entering green tents that are dotted about. These 'clone' your square, which results in multiple iterations working their way along several tracks. All jump as one, but in combination they Hoover up dots far more quickly than a solitary square. Sky becomes a tense juggling act to ensure as many squares survive for as long as possible, before they again merge.

As you play, there's a pleasant noodly piano-based soundtrack, and the visuals look so polished you imagine they'd squeak on dragging a finger over them. A single IAP lurks (£1.49), for turning off the ads (which appear as a strip across the bottom of the screen). **Craig Grannell**





## Sling Kong

We should be having a good old grumble about Sling Kong. Fundamentally, it does nothing especially original. It borrows the ‘catapult something across the screen’ mechanism from a dozen iOS mega-hits and then welds that to an endless vertical climber. Angry Doodle Fling, perhaps. The thing is, we can’t stay remotely mad at Sling Kong, because it does everything so well.

Its little characters have this oddly bewildered look about them, as if they’re as surprised as you that they’ve suddenly been dumped in an absurdly dangerous endless deathtrap. Their demise is always gleefully cartoonish and icky – fur flying when a monkey meets a saw blade, or an octopus splattering across the screen on suddenly finding itself between two large pieces of wood that have a particularly violent meeting.

The controls are superb, feeling nicely tactile as you drag back your little animal and let go to ping it across the screen. And the environment is the kind of chaotic nightmare that keeps you on your toes, ensures games are suitably short, but doesn’t hit you so hard that you won’t want to immediately have another go.





One of our favourite moments in Sling Kong is its prizes section. Gather enough coins and you send your little critter to get a serious headache, bouncing around a pachinko machine. Given that most other developers have had an imagination failure since clocking Crossy Road's 'random gift' model, it's great to see something a bit different when trying to win a new character. **Craig Grannell**

### Spaceteam

Glorious multiplayer fun, this – and the multiplayer part is essential. It's one of the few iOS games out there that you cannot play on your own.

Each member of the team sees a wonky-looking sci-fi dashboard on their screen, with a variety of read-outs and bizarrely labelled dials, buttons and levers. The screen will tell you to do something – “Set sprocket to 6”, to take a random example. If the sprocket dial is on your screen, all well and good; but most of the time, it'll be on someone else's, meaning you need to tell them what to do. In no time at all you're all shouting nonsense at each other, and the world is a wonderful place. **Dan Moren**



### Tiny Heroes

In this appealing fantasy-themed take on the tower defence game, you take the role of the





mad architect who sets out to shred and perforate any would-be adventurer who dares to loot his dungeon's precious treasures. Waves of cartoonish heroes wander in, then meet a swift end by spinning blade, concealed spike or caged monster. You'll have to plan for several kinds of heroes, from tough knights to crafty thieves, and balance between planning ahead and spontaneous fire-fighting. **Jason Tocci**

### Vainglory

Vainglory offers some of the best visuals seen on the App Store. It was used as a showcase for the iPhone 6 handsets' power – not to mention the power of iOS 8's Metal graphics tech – when they were first unveiled, and you should bear this in





mind when considering what hardware to run it on: it's compatible with iPhone 5s and up on the smartphone side, although it goes back as far as iPad 2 on the tablet.

The game spotlights three-on-three team-based action with (and against) fellow online players, and each squad must work together to take down enemy turrets and destroy the crystal at their opponents' base.

The free-to-play design thankfully puts no limits on gameplay: you can play as much as you want, but only with the certain free characters offered at any given time. If you want to use a non-free warrior, you'll have to pay a one-time fee with in-game currency. It's a remarkably fair and fun free game that doesn't penalise players who opt not to shell out. **Andrew Hayward**

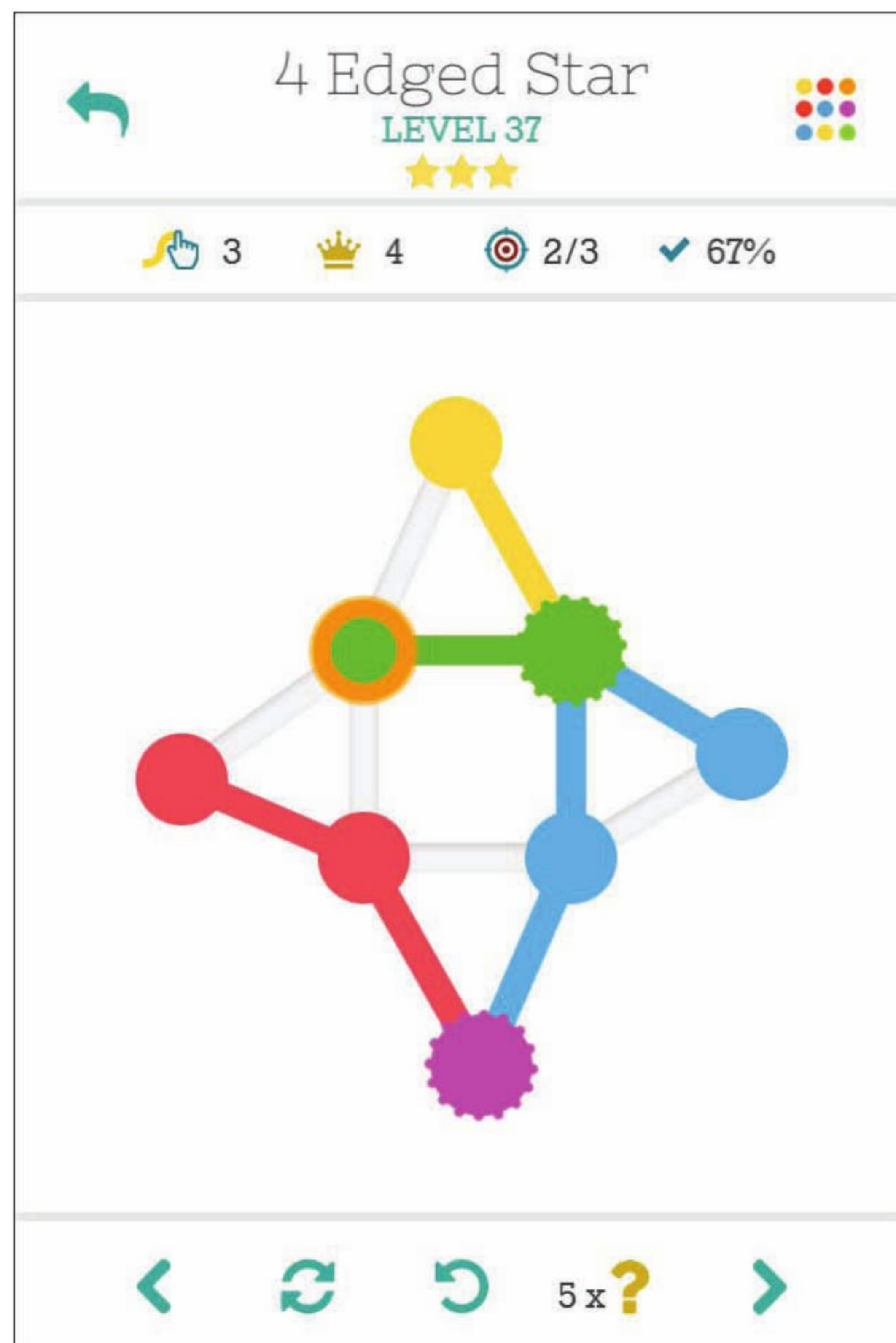


## Watercolors

If simple, attractive puzzles are your thing, take a look at Watercolors. You have to swipe across various blobs of coloured ‘paint’, moving them around the level and mixing them with other colours where necessary. The idea is to colour all the nodes in the correct colour with the lowest number of ‘brush strokes’ possible.

It’s a relaxing, neatly realised game and there’s very little pressure to spend money on additional level packs – although you may well choose to do so once you’ve completed the free offerings.

**David Price**







# Christmas gift guide

# The best new Apple-related tech we've seen this year

Christmas is rapidly approaching, which means gift-buying season is upon us. We know how difficult it can be to find the perfect gift for everyone, so here we've rounded-up the best new Apple-related tech we've seen throughout the year.

This year, Apple has launched the iPad Pro, iPad mini 4, iPhone 6s and iPhone 6s Plus, as well as a new MacBook and a brand new Apple TV. That means there are plenty of new accessories and peripherals to choose from, whether you're looking for something fun, something practical, something fashionable or something to keep your sparkly new Apple devices safe. We've got cases, battery packs, storage devices, speakers, headphones, quirky



gadgets and more in our Christmas Gift Guide 2015, so read on to get some gift inspiration.

### **In-ear headphones: [RHA T10i](#)**

**Price: £149.95**

The design of the RHA T10i headphones and quality of materials used scream “premium”, especially the hand-made steel drivers. The drivers themselves are a little rough around the edges per say, but we think this adds to the overall design and personality of the product, rather than detracting from it. That’s not all though, as the T10i features a gold plated, reinforced, oxygen free copper cable that should help to improve overall sound quality and help the cable last.

The headphones come with a total of 10 sets of tips (including two sets of memory foam tips and 2 sets of double flange tips) to help find the perfect





fit for your ears. As well as a large number of tips, the T10i also comes with three custom drivers – one for reference, one that boosts treble and one that boosts bass. There's always a worry that using bass enhancement will ruin the treble and mid-range, drowning in a sea of bass. We didn't find this to be the case with the T10i and overall, the headphones produced a great level of clarity and a satisfying sound.

## **On-ear headphones:**

### **Bowers & Wilkins P5 Series 2**

**Price: £249 from Amazon**

The Bowers & Wilkins P5 Series 2 headphones are visually gorgeous, with a black and silver combo crafted from aluminium and sheep leather for maximum comfort, with soft cups that feel easy on the ears while helping to keep external noise out.





The headphones come with an iOS-specific wire that allows you to control media playback, and a built-in mic means you can take calls and even access Siri without getting your phone out of your pocket.

The P5 Series 2's boasts a drive unit similar to those found in Hi-Fi speakers (according to Bowers & Wilkins anyway) which produces a drive unit with more precise and controlled movement, improving sound quality. The sound produced by the P5 Series 2 can be described as 'open' and 'spacious' with powerful levels of bass.

## Bluetooth in-ear headphones:

### Earin

**Price: €180 (£130)**

Earin is a relatively new company to the scene, established in 2013 and funded via a Kickstarter campaign. The idea was to create simplistic





wireless in-ear headphones that looked great and, most importantly, had no wires – an idea that was extremely popular, as the campaign was funded and two years down the line, Earin is finally available (be it in limited quantities).

Earin is small, measuring in at 14.5x20mm and weighs just 3.5g, making them the smallest wireless in-ear headphones on the market. The main difference between Earin and its competitors is that many companies that produce wireless in-ear headphones have to include an extra part that rests around your neck, holding all the tech (Bluetooth receiver, battery, and so on) while Earin has none of that. The ear-buds are stored in a small metallic capsule that'll wirelessly charge them whenever stored, providing you with fully charged wireless in-ear headphones whenever you need them.

Despite the small size, Earin doesn't disappoint when it comes to audio quality. The earbuds are manufactured with two dedicated amps that drive high-precision speakers, providing detailed sound with excellent mid tones, a clear high end and a tight bass. We were blown away with the quality of the earbuds, especially when paired with the (supplied) memory foam tips that provide a decent level of noise cancellation.

There's also an iOS and Android app available that lets you fine-tune your Earin experience, allowing you to tweak elements like bass and balance, as well as being able to keep an eye on how much battery life they have left.

The only issue? Due to such high demand, Earin is currently being sold in batches from the Earin website ([earin.com](http://earin.com)). You can head over to the site



now, sign up and receive an email when the next sale is due to launch.

## Bluetooth speaker: **UE Boom 2**

**Price: £169.99**

Ultimate Ears' UE BOOM 2 is the second generation BOOM, bringing with it a number of improvements when compared to the original (and hugely popular) UE BOOM. The main selling point of the UE BOOM 2 is its 360-degree audio, providing truly room filling audio and waving goodbye to the speaker audio 'sweet spot'. It's not just audio projection that makes the UE BOOM 2 the speaker that it is though, it's shock and dirt proof with IPX7 rated water resistance, meaning it'll survive any journey you take it on.

The UE BOOM 2 also boasts a 15-hour battery life, has a 100ft wireless range and can connect to two devices at once, providing a musical switch-over without having to disconnect from the speaker and stop the music from playing. It helps to make listening to music a more sociable experience, rather





than having one person deciding what's played. Users can also download the UE BOOM app to tweak the EQ of the speaker and even pair up with a second UE BOOM 2 for a true stereo experience.

It's available in a range of colours, from a rather modest black and grey to a more outlandish orange and purple combo. The best part about the UE BOOM 2 is that the company is constantly updating the speaker and adding new features, all of which can be installed via regular OTA updates, making the speaker future-proof.

### **Bluetooth speaker: [Denon Envaya](#)**

**Price: £99.99**

The Denon Envaya Mini is a gorgeous little Bluetooth speaker ready for use with your iPhone, iPad or Mac. It measures in at just 20.9x5.4x5.1cm, but it weighs a surprisingly hefty 558g, which makes it a little less portable than we'd like.

But where this speaker really excels is the audio, so there's a bit of good news for you. It boasts dual 40mm full range drivers with a 40x83mm passive radiator, which produces both crisp sound and impressive bass, making it a favourite of ours .





## Bluetooth speaker: iClever IC-BTS02

**Price: £20.99**

iClever's IC-BTS02 is one of the best cheap Bluetooth speakers we've tried. It looks great and it's affordable. It's surprising just how much sound emanates from this tiny zinc-alloy box. Given that you can easily fit the 64.5x64.5x70.1mm 261g iClever in a single hand, the 5W speaker hidden inside does a much better job than we should reasonably expect from such a portable speaker, both good on bass and free from distortion at high volume. The 5W speaker inside the iClever offers bedroom-filling sound that is much louder than what's available from your phone, tablet or laptop, although its meshed-top design forces it to throw audio upward rather than around the room.

With Bluetooth 4.0 technology it also boasts good range (up to 33ft), and we experienced no dropouts





walking room to room with paired phone in hand. If your mobile device doesn't support Bluetooth you can instead use the Bluetooth Wireless Speaker's AUX connection, and a cable is included in the box.

### Digital compact camera: **Fujifilm X-T10**

**Price: £499 (body only)**

The X-T10 is Fuji's entry-level X-series interchangeable lens camera, but, thanks in part to solid-feel metal build and rangefinder-like dials, sure doesn't feel like it's been compromised in order to arrive at its affordable body-only price tag.

Part of the reason for the X-T10's solid feel when gripped are its die-cast magnesium top and base plates, though arguably the real attention grabbers are those triple rangefinder-style top plate dials controlling shooting mode, exposure and sensitivity. We also get the relative luxury of a 2.36 million-dot





resolution electronic viewfinder complete with comfortable-feel eye cup. But the fact that the 3in back screen also tilts meant we often ended up referring to the larger 920K-dot resolution LCD for shot composition instead, as it obviously affords a wider range of framing options.

While there are plenty of manual controls for those who relish getting hands on, an auto mode switch lever provides the option to disengage brain and point and shoot with a simple flick. The camera's performance here is consistent and resulting images are both detailed and colour rich. It's worth noting that you'll be only purchasing the body for £499, with the most affordable kit lens option being the XC16-50mm lens, which can be picked up for an additional £100.

Alternatively, the variation that includes a standard 18- to 55mm lens will set you back £710. All kit lenses are black. As any first time Fuji X-series purchaser will be buying into a whole new camera system with the X-T10, you'll want to know there are currently 19 Fujinon X mount lenses directly compatible with the camera at the time of writing. In short this is our current 'go to' compact and proves a jack-of-all-trades option for anyone wanting DSLR-like results, without DSLR bulk.

## **Mac accessory:**

### **Apple Magic Keyboard for Mac**

**Price: £79.99**

Apple's Magic Keyboard is a must have for die-hard Apple fans. The Magic Keyboard offers an upgrade from Apple's last wireless keyboard both in terms of design and technology utilised. While





the original Apple wireless keyboard was powered by batteries (which was frustrating when you were half way through typing a document when the battery died) the Magic Keyboard features a built-in rechargeable battery, which is charged via a supplied Lightning cable.

The second new feature is the way that the Magic Keyboard pairs with your Mac. Where with other Bluetooth keyboards you'd have to head over to the Bluetooth preferences, search for the keyboard and pair with it, you need only plug the Keyboard into your Mac to complete the pairing process. If your battery does run out, you can keep the keyboard plugged in for use as a wired keyboard while it recharges.

Aside from the tech, the Magic Keyboard is much thinner, lighter and compact than the previous generation wireless keyboard. The key placement has been slightly tweaked for better travel, and the mechanism under each key has been redesigned to feel more solid when pressed, even near the edges. This provides a fantastic typing experience for Mac users, and despite not having features like backlit keys or support for multiple connections, it's a great keyboard – just slightly more expensive than we'd like.



**Mac accessory: [Logitech MX Master](#)****Price: £79.99**

The Logitech MX Master is a contender for the most comfortable and enjoyable computer mouse we've ever used. The MX Master is wireless, offering a standard Bluetooth connection as well as a USB that enables wireless support for those without Bluetooth connectivity. It can also switch between three Bluetooth devices with the flick of a switch.

The MX Master utilises Darkfield Laser Sensor technology to achieve amazing levels of accuracy on almost any surface. While optical and traditional laser mice rely on irregularities on the surface to track direction and speed, Darkfield Laser Sensors use “the smallest possible detail to create a micro-road map of the surface so you get better precision on more surfaces, even glass” according to Logitech.

Scrolling is also a joy with the Logitech MX Master. The precision wheel automatically shifts





from the standard ‘click-to-click’ mechanical style to ‘hyper-fast-scroll’ depending on the scrolling speed. The two modes can also be manually switched by using the button conveniently placed beneath the scroll wheel. It also features a side-to-side scroll wheel where your thumb sits, allowing you to scroll from side to side with ease – a bonus for both graphic designers and web surfers alike.

It lasts around 40 days on a full battery charge and only requires 4 minutes of charging to get a single day worth of use out of it. It has a battery indicator on the side so you’ll never be caught out with a dead battery, and charges using Micro-USB.

## **iPad accessory:**

### **Logitech Ultrathin Keyboard folio**

**Price: £59.99**

This modern offering from Logitech brings a full-sized keyboard integrated into a thin case for the iPad Air 2 (also available for the iPad Air and all iPad mini’s apart from iPad mini 4). The iPad Air 2





clips into the case using magnets, making it easy to attach and remove at a moments notice. The angle of the iPad can also be adjusted, making it ideal for a variety of situations as many folios only offer a single propped-up angle. The Ultrathin Keyboard Folio also folds around to protect the screen of the iPad when not in use.

It's worth noting that the iPad Air 2 edition of the Ultrathin Keyboard Folio is much thinner and lighter than older models. We like the clickable keyboard and the keys are well spaced with good travel. The Ultrathin Keyboard Folio is a little more plastic-feeling than Logitech's FabricSkin Keyboard, and it has more flex in it than we'd like, but on the whole the Ultrathin Keyboard is light, unobtrusive and a pleasure to use.

## **iPad accessory:**

### **BrydgeMini for iPad mini 1, 2 and 3**

**Price: £99**

You can't ruin the slim form factor of the iPad mini 1, 2 or 3 with a chunky, ugly case right? Thankfully that's not true with the BrydgeMini - instead of taking away some of the elegance of the iPad mini, it adds to the experience and transforms your tablet into a MacBook look-alike. In fact, they're so similar that we even reached for a nonexistent trackpad.

As with many keyboards designed for use with the iPad, the keys have been shrunk down. Usually this means that inaccuracies start to appear in your typing, especially when trying to type fast but with the Brydge, it's just not the case – there's great travel, and the keys feel solid when pressed. The only real adjustment we had to make was with the





shift button, which has a square button instead of the usual rectangular button.

There's no real surprise that it's constructed from aluminium because it's clear that Brydge wanted a keyboard that looked like it belonged with your (aluminium backed) iPad mini. The keys are black, made of plastic and feel great to type on – something that's very important to look out for when looking for a keyboard. A welcome addition is a backlight keyboard, much like the MacBook Air and helps with typing in low-light conditions.

It's designed so that your iPad mini slots into the hinges simply and easily and is held in place thanks to the friction caused by rubber inserts. The Brydge comes with shims that fit into the hinges for slight width adjustment between the iPad mini 1, 2 and 3. If you've bought the recently released iPad mini 4, hold fire – the existing Brydge won't fit, although the company are looking to launch an iPad mini 4 variation in January 2016.



**Apple product:**  
**Apple TV (2015)****Price: From £129**

If you've got an Apple loving TV fanatic in your life, what better gift to buy than the new Apple TV launched in October 2015. What's so different between this Apple TV and the Apple TV that has been on sale for the past few years? Without trying to sound too dramatic, it's had a complete overhaul in every area apart from the design of the casing.

The New Apple TV features tvOS, a brand new OS that brings advanced functionality to the once basic Apple TV. The main highlights include Siri support, which allows Siri to perform the same tasks on your TV as it's able to on your iPhone (with the exclusions of calling and texting, of course) with a few additional benefits. One of these benefits is universal search, which allows users to search for a genre, film or actor and receive results not only from iTunes but also the likes of Netflix.

It also includes a dedicated App Store with not only standard apps, but games too, which turns the Apple TV into a games console. complete with a





Nintendo Wii-esque motion controlled remote that also features a built-in mic for use with Siri. The Touch surface of the remote allows you to swipe between menus in a similar fashion to how you'd use your iPhone, bringing a more unified Apple experience to the Apple TV

**Apple product:**  
**Apple Watch)**

**Price: From £229**

If you've got an iPhone, why not combine it with a brand new Apple Watch? There are three variations of Watch to choose from, ranging from the Sport (cheapest) to the Watch (mid-range) and the Edition (high-end), but you'll be glad to know that in terms of functionality, there's no difference between the three. What can you do with an Apple Watch? It allows you to view and respond to your notifications





without needing to get your phone out of your pocket – in fact, you can even take calls directly from your Watch for those no-hands-free moments.

It also features fitness tracking technology and a heart rate monitor for those that are health conscious. It'll track how many hours you've stood up for, how long you've exercised for and how many calories you've burned (along with step count, distance estimate, and so on) and displays it in an intuitive and user-friendly way – with rings. A full ring means you've hit your target, and is something that can be quickly glanced at throughout the day to provide an extra bit of motivation.

Apps are also a huge part of the Apple Watch, with many third-party app developers offering Apple Watch companion apps and complications (or widgets) that can be displayed directly on the customisable watch face.

## **Apple product:**

### **iPad mini 4**

#### **Price: From £319**

Those in the market for a new iPad should set their sights on the brand new iPad mini 4, which launched in September 2015. Unlike previous iPad mini updates, the iPad mini 4 brings a thinner, lighter form factor and a number of internal upgrades that might make the purchase more worth your money. In terms of form factor, the iPad mini 4 is only 6.1mm thin, making it 18% thinner than the iPad mini 3, and weighs a lightweight 299g.

Inside the iPad mini 4 you'll find Apple's second generation 64-bit chipset, the A8 chip, which isn't as fast as what you'll find in the iPad Pro but will





handle gaming, video editing and browsing the web with ease. The cameras have had an upgrade too, featuring an improved sensor and an “Apple-designed image signal processor” in the rear-facing 8Mp camera, and the 1.2Mp front-facing FaceTime HD camera now lets in 81 percent more light, perfect for FaceTiming and selfie taking.

### **Gaming accessory:**

#### **Homido virtual reality headset**

**Price: From £49**

The Homido virtual reality headset aims to bring Virtual Reality to the iPhone, as well as a variety of Android and Windows Phone devices. The idea is that you slot your iPhone (even the 6s Plus) into the



front of the headset and is used as the headsets computer and display. The best part about using your iPhone in the Homido VR headset is that it makes the headset completely wireless, so you're free to enjoy your virtual world with no cables holding you back – and with the App Store, you've already got access to VR games.

However, if you thought that the Homido VR headset was just a more expensive version of Google Cardboard, you'd be wrong. In our opinion, the Google Cardboard is only used to see whether VR is for you, and is in turn quite uncomfortable and offers limited functionality. On the other hand, the Homido boasts some pretty interesting features including custom-made VR lenses that offer a 100-degree Field of View and an adjustable IPD (distance between the lenses) as the gap between the eyes isn't the same for everyone and can affect the overall experience.

You also have the option of buying a Bluetooth controller along with the headset to bring true VR gaming to your iPhone. (Touch-based games won't work in Homido as you can't tap the display while its being used in the headset).

### **Gaming controller:** **SteelSeries Nimbus**

**Price: From £39.99**

The SteelSeries Nimbus is one of a few gaming controllers designed for use with the 2015 Apple TV, although it's also compatible with Macs, iPhones and iPads – in fact, SteelSeries has an official Nimbus companion app for iOS users that lists charts of apps that are MFi (Made for



iPhone, iPad) controller compatible, turning your iPhone, iPad or Apple TV into a fully fledged games console. There's a hat-tip to the Xbox One controller in terms of its design, with symmetrical analog sticks a la PlayStation and the addition of a Lightning connector for easy charging.

As well as that, it features console-level features including pressure sensitive buttons, a menu button and a built-in rechargeable battery that'll last on average 40 hours on a single charge. It's lightweight, sleek and is a must-have, especially for Apple TV users. In fact, a colleague said that the "Nimbus offers the best combination of feel, functionality and starting price" when compared to other MFi controllers available. You can't argue with that really, can you?







## iPad buying guide

Here's the lowdown on which model is right for you

**S**o you're in the market for a new iPad. Excellent choice – I couldn't live without mine. It's my companion when I'm catching up on news and email in the morning over tea, reading a comic book in the evening to unwind, or watching a movie while travelling on a plane.

But these days, picking an iPad can be tricky. Apple currently sells five different models of iPad, with prices ranging from £219 to £899. There are



size, storage, colour, and connectivity options to consider. All in all, there are 61 different variations of iPad from which to choose. So which iPad is right for you? Read on to find out.

## iPad Pro

The iPad Pro is the newest and biggest iPad, with a 12.9in diagonal screen. It's a bit like someone ripped the screen off of a 13in laptop and turned it into an iPad. The iPad Pro is also the fastest iOS device ever and offers many features that aren't available on any other device.

If you're an artist who has dreamed of having a larger and more responsive iPad to draw on, the iPad Pro is a dream come true. It's the only iPad that supports the £79 Apple Pencil, and while there are other pressure-sensitive iPad styluses on the market, this is the one that's made by Apple – and that means it will probably be the best in its class, if for no other reason that it will be deeply integrated into the iPad Pro's software. The iPad Pro's screen can scan for the location of the Apple Pencil 240 times per second, twice the rate of other iPads.

If you're someone who does a lot of serious work on your iPad, the iPad Pro is made for you, too – its larger screen is perfect for running two apps in Split View. And rather than having to rely on Bluetooth to attach an external keyboard, the new Smart Connector supplies data and power to both Apple's £139 Smart Keyboard (which doubles as a carrying case) as well as other forthcoming keyboards, including the Logitech Create.

But despite its name, the iPad Pro isn't just a tool for artists and other people wanting a more



powerful and expansive iPad to get work done. It's also a fantastic (albeit pricey) entertainment device, thanks to its stereo speakers and that gorgeous 2732x2048-pixel display.

For all its size, the iPad Pro doesn't feel heavy. At 713g, it's about as heavy as the original iPad – but its weight is spread over a much larger area, making it comfortable to hold.

**Colour options:** Silver, Gold, Space Grey.

**Storage options:** 32GB (£679) or 128GB (£799).

**Cellular option:** Only the 128GB model is available with a cellular variant, for £899.

**Who it's for:** Artists, people who use their iPads to get work done, and anyone who wants a big, bright screen (and good audio) for watching videos.

## Pad Air 2

It was introduced more than a year ago now, but the Air 2 is still the beating heart at the centre of the iPad product line. It was so advanced compared to any other iOS device that preceded it, that even a year later it's the model that most people should consider when they're shopping for a new iPad.

In terms of tech specs, the iPad Air 2 is impressive: It's got a three-core Apple A8X





processor and 2GB of RAM. This year's iPad Mini 4 can't even match it in terms of speed, and the extra RAM improves almost everything when it comes to switching among a bunch of different apps. While it's technically 'last year's model', it's probably more accurate to say that the iPad Air 2 was next year's model back in 2014, and in 2015 it's still in its prime.

The iPad Air 2's 9.7in display puts it firmly in the center of the iPad product line. It's got the same screen size as the original iPad model from five years ago – but of course, things have advanced an awful lot since then. This screen is a Retina display at 2048x1536 pixels, and is laminated to an anti-reflective glass coating, the result being a relatively low-glare screen that feels incredibly close to the surface. It's also thin and light, weighing in at 436g.

Yes, the displays of the iPad Air 2 and the iPad mini 2 offer the exact same number of pixels. What sets them apart is sheer size. On the Air, those pixels are given room to breathe – and if you've got aging eyes, you'll be grateful for that. I've found reading comic books much more pleasurable on the iPad Air 2 than on the iPad mini, and it's entirely down to the fact that everything on the screen is bigger.

To sum it all up, the iPad Air 2 is a powerful, thin, light iPad with a beautiful screen. It's the mainstream iPad and the one that most potential iPad buyers should consider first.

**Colour options:** Silver, Gold, Space Grey.

**Storage options:** 16GB (£399), 64GB (£479), or 128GB (£559).



**Cellular options:** 16GB (£499), 64GB (£579), or 128GB (£659).

**Who it's for:** Just about anyone, but especially people who are happy to trade a little weight and size for a larger screen that's more comfortable for imperfect eyes to scan.

### iPad mini 4

Apple pretty much took 2014 off when it came to the iPad mini, adding a Touch ID sensor (and very little else) to the iPad mini 3. But 2015 has been very, very good to fans of the smallest iPad. The iPad mini 4 is powered by a speedy A8 processor and has 2GB of RAM, making it almost – but not quite – the match of its big brother, the iPad Air 2. The Air 2 is a little bit faster, but only by a hair. And the iPad mini 4 has access to all the advanced features of iOS 9 that its predecessors didn't have, including Split View multitasking.





The iPad mini 4's screen is also to die for. The Retina display is laminated directly to the glass, reducing reflection and making you feel like the pixels are right underneath your fingers. The 2048x1536-pixel resolution is the same as the iPad Air 2 – the only difference is that all 3.1 million pixels are packed into a 7.9in diagonal screen, as opposed to the Air's 9.7in diagonal.

But making the trade-off that favours smaller size is what the iPad mini line has always been about. It's a great size, at 203.2x134.8mm, 298.8g. My 11-year-old son has been toting around an iPad mini for the past couple of years, and he loves it. As for me, I always found the smaller size of the mini preferable to the Air, but in the past year I've become aware that my aging eyes feel a lot less strain when viewing all those pixels on a bigger screen.

If you want the smallest screen with the most power, though, the iPad mini 4 delivers.

**Colour options:** Silver, Gold, Space Grey.

**Storage options:** 16GB (£319), 64GB (£399), or 128GB (£479).

**Cellular options:** 16GB (£419), 64GB (£499), or 128GB (£579).

**Who it's for:** It's the perfect device for someone who wants it all, but wants to keep it small.

## iPad Air

The original iPad Air, released in 2013, is still available for sale. It's a lot less than the iPad Air 2,



but it's quite a bit slower and doesn't have access to some new features like Split View multitasking. The screen, while the same resolution as the iPad Air 2, isn't laminated to the glass, so it's got more glare and feels a bit further away when you hold it.

This is not a bad iPad by any means, but it is two-year-old technology, and for the same price as the 16GB model you can buy the 16GB iPad mini 4, which is faster and has more RAM. The best buy in the line is the 32GB model, which is £80 less than the iPad Air 2 – but also has half the storage capacity. And you can't get more than 32GB of capacity in this model – if you want more storage, you'll need to buy a different model.

In general, we're reluctant to recommend that anyone buy an original iPad Air unless price is absolutely the biggest consideration, and even then, the iPad mini 4 is worth considering. Chances are good that many future iOS features will not support this device, so if you care about speed and a long device life, steer clear. On the other hand, the iPad Air has a big 9.7in Retina display and is perfectly suitable for everything but the most taxing productivity multitasking and the latest cutting-edge games.

**Colour options:** Silver, Space Grey.

**Storage options:** 16GB (£319), 32GB (£359).







**Cellular options:** 16GB (£419), 32GB (£459).

**Who it's for:** Price-conscious buyers who want a full-size iPad and don't mind if it's a little slower than the mainstream model.

## iPad mini 2

Like the iPad Air, the iPad mini 2 was originally released in 2013. As a result, it's slower and has less RAM than modern models. But it's the cheapest iPad by far, starting at £219. For that price, you get a light (331g), small iPad that's got the same 2048x1536 resolution as the other iPad mini and iPad Air models.

Yes, there are some concerns about buying a new iPad that's using two-year-old technology. Certainly if you are someone who was committed to cutting-edge games and multitasking between lots of productivity apps, this model might not be for you. But if there's someone in your life who just wants to play games, or surf the web, or check Twitter, this is a pretty great little tablet for a pretty great price.



Until this summer, when I switched to the iPad Air 2, my everyday iPad was an iPad mini 2, and I loved it. Yes, it's not as good as this year's models, but it's still pretty great.

As with the iPad mini 4, my only caution is for people who are older and are dealing with aging eyes or failing eyesight. My mother's first iPad was an original iPad mini, but she's much happier now with a full-sized iPad Air. The mini screen size is ideal for people with good vision.

**Colour options:** Silver, Space Grey.

**Storage options:** 16GB (£219), 32GB (£259).

**Cellular options:** 16GB (£319), 32GB (£359).

**Who it's for:** Kids, casual users, pretty much anyone who wants a low-cost iPad and doesn't mind the smaller screen size.







# iPad Pro vs MacBook Air

We look at whether an iPad Pro can replace a Mac?

From £679 inc VAT • [apple.com/uk](https://apple.com/uk)

**H**ere we'll compare the 13.3in MacBook Air to the iPad Pro, as it has a similarly sized 12.9in screen and thus, should have similar dimensions. Even though it's called the MacBook 'Air' it seems to be the bulkier of the two, though not by much – the iPad Pro measures in at 305.7 x 220.6mm and is only 6.9mm at its thickest point, while the MacBook Air measures in at 325 x 227mm and is 17mm at its thickest point. Although with this being said, the iPad Pro is clearly the lighter option of the two, weighing in at a lightweight 713g compared to the bulkier 1342g MacBook Air.



However, dimensions aren't everything; for an iPad Pro to replace a MacBook Air, it needs to be able to do everything a MacBook Air can, and more. While in terms of processing power, the iPad Pro is an interesting specimen (we'll come to this in more detail below), it falls flat on its face in one important area; ports. Though the MacBook Air has even less ports than the MacBook Pro (due to its slim form factor) it still boasts more connectivity than the iPad Pro, offering a headphone port, Thunderbolt 2 port, two USB 3.0 ports, an SDXC card slot and of course, the hugely popular MagSafe 2 power port.

The iPad Pro on the other hand? Its new 'smart' connector used for connecting keyboard covers is the only other addition to the single Lightning port and headphone port available on the device. The lightning port can be used to import photos and videos from an SD card when used with a Camera connector (sold separately) and mirror the iPad Pro display to the TV using a Lightning Digital AV Adaptor (also sold separately), but those looking to pop a memory stick in and browse their files will be disappointed. It's the one area we feel the iPad Pro is lacking, especially for those looking to use the iPad Pro on business trips – even its main competitor, the Surface Pro 4, has a number of ports including a full size USB 3.0 port, a Mini DisplayPort and a micro SDXC card slot.

So the iPad Pro might not be the best option for business men and women, but what about for those looking for a media consumption device? This is an area where the iPad Pro excels thanks to a number of factors, but mainly thanks to its' display and audio. The iPad Pro has a 12.9in LED touchscreen with a



resolution of 2732x2048, giving it a pixel density of 264ppi, while the MacBook Air boasts a 13.3in glossy display with a native resolution of 1440x900, almost half of the iPad Pro offering – and the difference is noticeable. This makes gaming, catching up on the latest TV and even browsing the web on an iPad Pro a much crisper, vivid experience.

Although media consumption doesn't just rely on video – as any decent video editor will tell you, audio has a just as important – if not more important – role to play. Think of it like this; if you've got a native 4K video but low quality, highly compressed audio, you won't enjoy the experience the same as with crisp, high quality audio.

The MacBook Air features stereo speakers that aren't exactly ground breaking; while it's satisfactory for catch-up TV, it's isn't something you'd constantly be playing music though (we





always opt to use a Bluetooth speaker rather than the built-in MacBook Air speakers).

The iPad Pro on the other hand has not two, but four speakers that help to produce a “stereo soundstage” as Apple describes it. The speaker housings have been machined directly into the body of the iPad Pro, producing a wider frequency range, improved volume and audio that seems to be coming directly from the center of the display, opposed to from behind or the sides, as is the case with other iPads. It really provides a more immersive experience when gaming or watching movies, and although it still isn’t as bass-y as we’d like, it’s a huge improvement over the MacBook Air and previous iPad models.

It’s time to move onto the most important part of the comparison (for some at least) – processing power. The 13.3in MacBook Air boasts a 1.6GHz dual-core Intel core i5 processor, Turbo Boosted up to 2.7GHz with 4GB of RAM and Intel HD Graphics 6000, which when coupled with a SSD provides a solid performer with enough power to complete every day tasks, as well as use processor-hungry software like Photoshop.

The iPad Pro features Apple’s latest (and greatest) SoC, the 64-bit A9X, which is a different beast altogether – even with regards to its design.

Chipworks, a patent analysis and competitive intelligence company, has taken a look at the A9X chip and posted its own tear down online. First things first, the chip is around 147 square millimetres, making it 40 percent larger than the size of the TSMC-built variant of the A9 chip found inside the iPhone 6s and 6s Plus, bringing with it a huge



increase in transistor count and also added difficulty in the manufacturing process.

The company also notes the absence of the level-three cache memory found in the A9 chip – the A9X instead features a memory interface that's twice as wide as what's found on the A9, which allows the chip to pass data to and from memory at twice the rate (51GB per second to be precise). There's also 12 graphics cores, which makes any graphic-related task an absolute breeze on the iPad Pro. The larger form factor of the iPad Pro helped make this happen – in fact, the A9X is larger than Intel's latest quad-core desktop processors, and that's pretty impressive.

All this equates to a chipset that is making heads turn – and when coupled with 4GB of RAM and an M9 motion co-processor, you've got a machine that can handle anything you can throw at it. In fact, in our benchmarking, we found the iPad Pro to score 3231 in single-core mode, and a whopping 5478 in multi-core mode. While a MacBook Air may struggle with the likes of high-resolution video editing, the iPad Pro is capable of editing three streams of native 4K video at once with no sign of slowing down.

## Software

The iPad Pro comes running iOS 9, Apple's latest mobile operating system whereas the MacBook Air features OS X El Capitan, a fully-featured desktop OS. iOS 9's key iPad-focused features like split-screen browsing and picture-in-picture mode work really well on the iPad Pro. You no longer need to scroll down to continue reading an email because (in general) the 12.9in screen will be able to display the email in full, even when in split-screen mode. This in



turn makes you more productive, as you're able to operate two apps independently at the same time and get more information at a glance.

However, with a MacBook Air running OS X El Capitan, you can have a small number of windows open at the same time, with the ability to switch between active windows being only a click of the trackpad away. Some people may think using a trackpad is faster and more efficient than using a touchscreen, but we think this is more down to personal preference than anything else.

One area where the iPad Pro may not be able to compete with its OS X counterpart is, ironically, pro apps. For a long time, developers have complained that Apple's App Store policies act as a barrier for those that want to create iOS versions of Mac apps.

Professional apps can cost hundreds of pounds

– Digital design app Sketch 3 costs £79.99 when purchased for Mac, which is a lot of money to hand over without using the app first. Of course, Mac users are treated to a free trial before parting with their cash, but the same can't be said for the iOS App Store, where free trials aren't available.

Consumers have to take the leap of faith, purchase the app and hope it's what they need – something that wouldn't happen with pro apps that would likely have a similar price tag to their Mac counterparts. The other option is to lower the price and hope it





encourages more sales, but with professional apps that cater to rather small, niche markets, it's not a viable option. Even if consumers did pay full price for a pro iPad app, paid-upgrades aren't available with the iOS App Store, meaning developers that put resources and time into app redesigns can't reap the benefits of extra income.

However, with that being said, the iPad Pro wins in terms of app discovery and availability. Though there is a multitude of apps available for Mac, the Mac App Store isn't over-populated to say the least. Compare this to the iOS App Store which has over 1,500,000 apps and it's clear to see that in terms of app discovery, the iPad Pro offers the better platform. It's ideal for casual gamers, too – where on a Mac you'd pay £10 to £40 for a decent game, iOS games are generally much cheaper, with the average game costing between 79p and £4.99.

When it comes to downloading files from the Internet, the MacBook Air is the clear winner. iOS users can download and open files, but it can't be any old file – it has to be a photo, video or a supported file type that can be opened by an installed iOS app. Even then, downloads can be slow and depending on the overall size of the download, you could run into errors – as we often have – whereas downloads on a MacBook Air are handed with ease, no matter whether it's large or small. You also have complete freedom with file formats too, as you can download any file type to your MacBook Air.

## Accessories

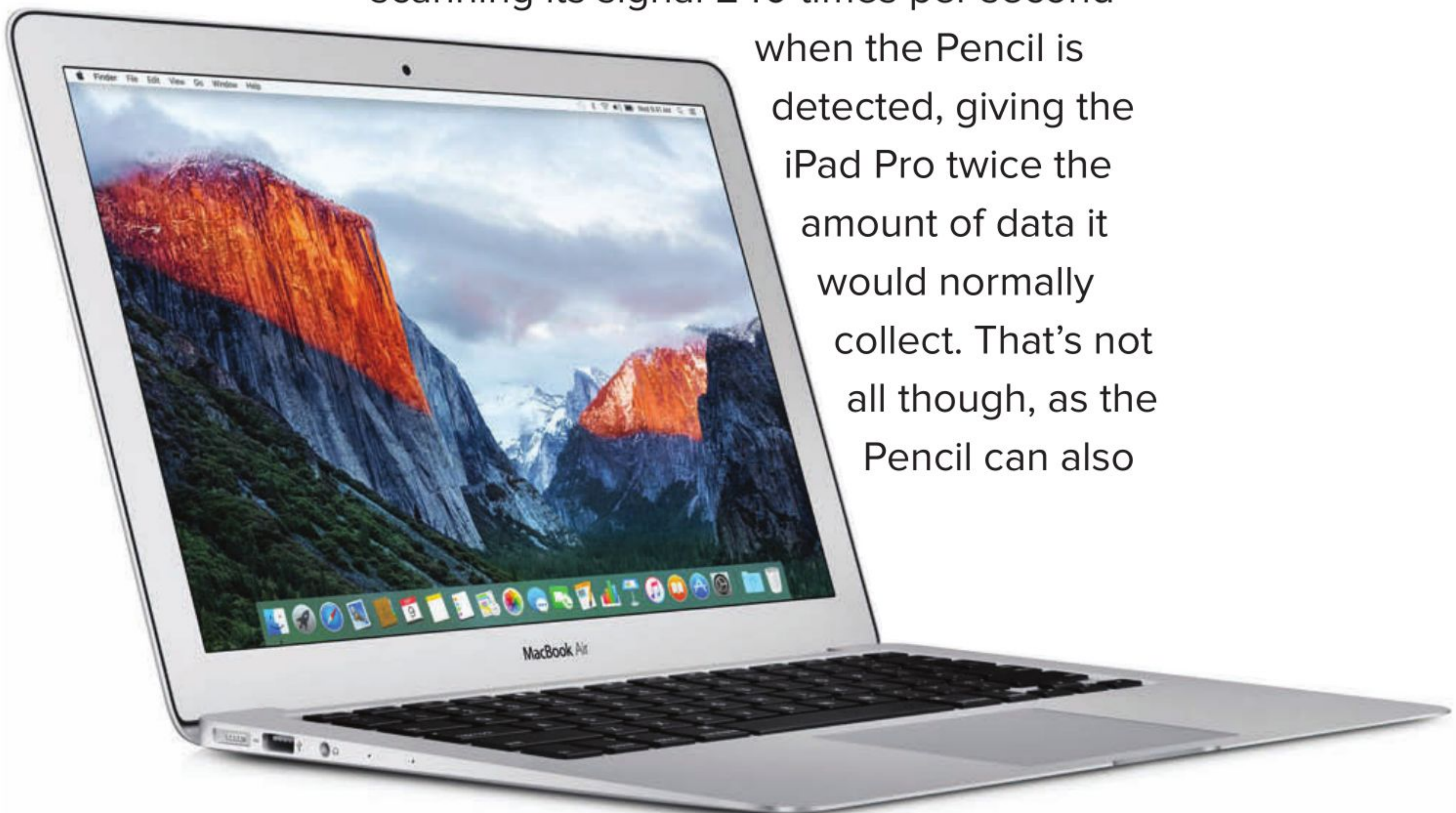
Let's move on to accessories, an area particularly important for graphic designers and artists alike



that use digital platforms to create their artwork. Of course, the MacBook Air isn't touchscreen-enabled, so using any kind of stylus is out of the question – and trying to draw on a MacBook display would be pretty awkward (with its current design, anyway). Creatives using a MacBook Air for work would have to fork out for a graphics tablet to produce similar results to what is possible on the iPad Pro with the Pencil – except a decent graphics tablet, like the Wacom Intuos Pro, costs £299.99. Not ideal when you've just paid £850 to £1,000 for the laptop.

As mentioned, the Apple Pencil is the flagship accessory for the iPad Pro, and was announced alongside the device itself in September 2015. The Pencil was designed specifically for use with the iPad Pro, and boasts a number of impressive features, including virtually no lag when drawing. This is possible because the iPad Pro can sense the difference between Pencil input and finger input, scanning its signal 240 times per second

when the Pencil is detected, giving the iPad Pro twice the amount of data it would normally collect. That's not all though, as the Pencil can also





detect varying levels of pressure, which allow for better shading, and should help to produce more life-like images than before.

There are also two tilt-sensors built into the tip of the Pencil that calculate the orientation of your hand, meaning you can tilt the Apple Pencil and shade like you would when using a real pencil and achieve the desired effect. Even with regards to its design, it's a winner. Last issue, illustrator Pete Fowler reviewed the iPad Pro and Pencil. He remarked that "In your hand, it just feels fantastic" and that "there's a really nice weight to it". It's a fascinating accessory, even for those without an artistic bone in their body (like us) and at £79, it's a lot cheaper than buying a graphics tablet.

## Price

Finally, we come to pricing. The iPad Pro starts at £679 if you want the variant with 32GB of storage, jumping up to £799 for 128GB of storage, and for those that want to add cellular connectivity, it jumps up to £899 (with 128GB of storage, of course).

Though that may seem like a lot of money to fork out for an iPad, especially considering the iPad Air 2 starts at £399, its processing power and hardware puts it in the same category as the MacBook Air.

The 13.3in MacBook Air starts at £849 and comes with 128GB of PCIe-based flash storage, jumping up to 256GB for those wanting to part with £999 of their hard-earned cash. Comparing 128GB Wi-Fi models (there is no cellular MacBook Air), it makes the iPad Pro £50 cheaper than the MacBook Air, but that's not including accessories. For the iPad Pro to replace your Mac, you'll probably have to fork



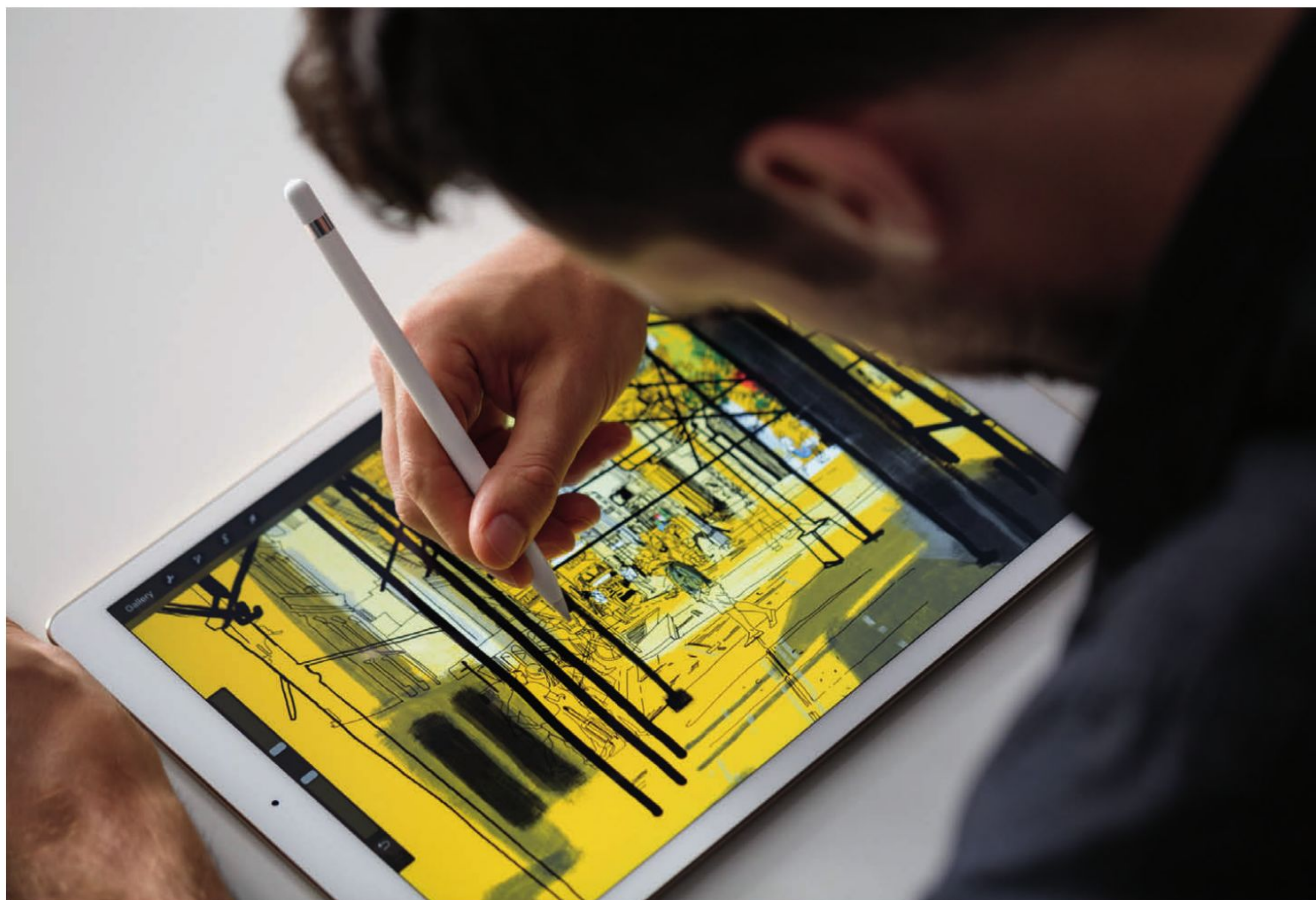
out for a keyboard cover – the official Apple iPad Pro keyboard cover will set you back £139. And if you're a creative, the Pencil costs an additional £90, although buying both accessories are a cheaper option than opting for the £299 Wacom Intuos Pro, as mentioned earlier.

## iPad & iPhone User's buying advice

Reverting back to the original question of whether an iPad Pro could truly replace your Mac – it's a hard question to answer, and we think it depends on a number of factors, from what you'd use the iPad Pro for, to your requirements for work. Are you a creative? Do you edit videos or photos on the fly? Or do you just want a bigger iPad for TV and gaming? Then you could probably ditch your MacBook and buy yourself an iPad Pro. However, if you rely on USB-powered accessories for every day life (like memory sticks), rely on software that isn't available on an iPad or just need a “do it all” system, the MacBook Air seems to be the better option.







## Apple Pencil

Much sharper than the average smart stylus

£79 inc VAT • [apple.com/uk](https://apple.com/uk) ★★★★★

**A**pple's pressure-sensitive Pencil is a home run, exhibiting remarkable performance on the new iPad Pro, but that should not come as a shock: The two were engineered from the ground up to work together and only with each other.

The iPad screen recognises when you are using the Pencil, and in response, dynamically boosts its scan rate to 240 times per second (twice the speed it scans for your finger) to minimize latency,



the time between the Pencil's point touching the glass and a mark appearing on the canvas. Simultaneously, the Pencil's sensors work with the display to detect its position, force, and tilt via APIs in iOS 9.1 that not only register current location but predict future movement.

Press lightly to get a thin stroke, press harder to get a thicker stroke, and rub lightly with the side of the Pencil's tip to get shading action, just like using a regular pencil, though the quality of that shading depends on the app and the brush you choose.

## Sketching and writing

Straight out of the box, Apple's Pencil is a joy to use. You don't need to do any elaborate pairing or visit the Settings app – just plug the Pencil in to the iPad Pro's Lightning port to pair it, then go to town. It works as a stylus with any app, letting you launch, navigate, scroll, and complete basic operations. You can even trace over a regular sheet of paper.

But Pencil doesn't do everything. Edge gestures to access Notifications or the Control Center don't work, and you can't use it to open a second app in Slide Over or resize apps in Split View. You must still use your finger for those functions, and I'm good with that because it's not necessary, and you don't want to accidentally invoke functions with Pencil.

I tested the Pencil with Evernote, Notability, Adobe Photoshop Mix, Fix and Sketch, Complete Anatomy, LiquidText, Pixelmator, Procreate, Paper, Notes, Apple Photos, and iMovie, along with the iPad's built-in apps. Remarkably, each app performed as advertised, and in accordance with its own conventions, including Notes' nifty on-screen ruler



that helps you draw a straight line. The only anomaly was the reference app Complete Anatomy, aimed at medical students, which suffered from a slight lag time when I used the Pencil to annotate the text.

Cursive handwriting and printing can be a heartbreak with many styluses, and performance varies widely. However, I have yet to see a handwriting function that works quite as well as Pencil. (It reproduces my poor penmanship flawlessly.) Pencil is a totally natural notetaker and such a pleasure to use, that I'm almost tempted to lug the iPad Pro around for the sheer joy of writing with it. And just for the record, I thoroughly enjoyed sketching with it too, though I'm far from a freehand artist.

## Use and handling

Styluses are a personal thing. What feels right to one paw doesn't necessarily translate to another. Apple's Pencil has just the right amount of balance and heft so that I can use it for long periods of time without feeling hand strain, just like a traditional pencil. That's actually a bigger deal than it sounds. Only one other stylus I've used competes, and that's Adobe's Ink. Most other styluses wear out my hand in a surprisingly short period of time.

That said, I would have appreciated the instrument to have more of a matte feel, as opposed to the slick plastic surface. It was not hard to grip, nor did it slip from my fingers, but it would feel even better with an ever-so-slight degree of velvety friction on the surface.

That's also related to the diameter. Being a pencil, it's thin. And for drawing, that's great. But





when I'm taking notes with it, I'm reminded of how I tend to go for pens with a bit of a thicker barrel to ease the strain on my hand as the words fly from by brain to my fingertips. I'm not advocating Apple make the Pencil barrel thicker, but rather expressing that the variety of tasks the Pencil affords will offer different experiences.

The Pencil is pencil-like in length, so my small hand was just about able to handle it in a natural way. It edges toward being a bit too long, and I'm glad Apple decided not to use the end tip as an eraser, like traditional pencils, because at that length, it might feel awkward.

Most styluses are an either-or affair: You're using your finger or you're using the stylus. Thanks to a new touch subsystem in the tablet, the iPad Pro can recognize both inputs simultaneously and accurately differentiate between the two.

Automatic and accurate palm rejection makes the Pencil convenient because I can actually park my fist directly on the iPad's glass while writing, drawing, or painting without having to worry about errant marks showing up on the canvas.



And that brings me to the screw-on tip. Most high-quality styluses advertise their presence with a clicky little sound that gets old really fast. When I'm stressed or frustrated with a project, the last thing I want to hear is a clickety-clack. The Pencil has a point, but its materials make a very muted sound, which is much more agreeable. Apple thoughtfully includes a replacement tip in the box, just in case.

The only problem is losing tiny things. The second tip can stay in the box until you need it, but take care not to lose the adaptor that connects the Pencil to your Mac or an AC power adaptor for charging, or the little cap that covers the Lightning connector, as you cannot park both on the Pencil at the same time.

## Limited use cases

To use the Pencil, which at £79 I consider reasonably priced, though on the high end of the spectrum, you also need the iPad Pro, which starts at £679 and goes over £899. The Pencil is totally useless on any other iOS device.

It's a little disappointing that Apple limits the Pencil to iPad Pro users, when it could potentially engage a larger audience of late-model iPad users. Apple appears intent on creating a uniquely superior experience with the Pencil, so that a different kind of interaction, with perhaps more latency and less pressure sensitivity and tilt awareness, would defeat the purpose. Nonetheless, some people will stick with their laptops and smaller iPads and never need the iPad Pro. Depriving them of the Pencil doesn't seem quite fair.



Both the Pencil and the iPad Pro hold up well in terms of battery life, and when the Pencil's charge does drain, it takes almost no time to get it up and running again. The initial charge lasts about 12 hours, but 15 seconds plugged into the Lightning connector of the iPad Pro gets you back to work for another half hour before you can even lose your train of thought.

Getting a quick battery boost directly from the host device – without having to get up out of your chair to hunt for a cord or charger – is the way we all should work. Charging the Pencil is easier and faster than sharpening a regular pencil.

Battery life, in this case, is academic, and the Pencil has no onboard battery indicator. However, you can check the battery level by enabling a Batteries widget in Notification Center; plus, an on-screen alert flashes when the battery hits 5 percent.

### **iPad & iPhone User's buying advice**

If you're an iPad Pro owner, should you buy the Pencil? That's a no-brainer – Apple hit it out of the ballpark in terms of ease of use and performance. Even those who feel they have no specific use for it right now will likely find it makes life easier in various, unexpected ways.

If you are an iPad owner that does not need an iPad Pro, it's okay to be annoyed that you can't use the Pencil with the rest of the iPad lineup – but that might not be the case forever. I think Apple should democratise the Pencil, upgrading the next generation of iPads to take advantage of at least some of the Pencil's charms.



